A Clinical Lecture
ON
THE NATURE OF DISCHARGES AND DOUCHES.

Delivered at the Central London Throat, Nose, and Ear Hospital on Feb. 28th, 1901,

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DOUCHES AND IRRIGANTS.

Purposes.—A douche or irrigant may have for its object: (1) the mechanical removal of morbid secretions, accumulations, and foreign bodies; or it may be used (2) for antiseptic purposes; or (3) for diagnosis.

Essentials.—To effect satisfactorily these objects the douche or irrigant must conform to certain requirements which vary according to circumstances. 1. The solution employed should, when practicable, be a solvent of the substance to be removed. 2. The reagent should be itself readily soluble in water and form a clear solution. 3. It should be non-irritating to mucous membranes and sensitive surfaces. 4. To ensure thoroughness it should possess the power of penetrating the surface tissues. 5. It should be miscible—i.e., chemically compatible with the most effective antiseptics. 6. It should be economical in cost and readily available. Of these essentials perhaps the most important one is that of having the power to dissolve the discharge, since there are so many solutions in general use which not only have no such solvent action but actually precipitate and harden the substances which they are intended to remove.

Nature and composition of discharges.—As a preliminary to choosing the materials for a douche it may be expedient to consider the nature and composition of the different discharges and accumulations which demand treatment. So far as our own field of work is concerned they may thus be grouped: (1) catarrhal; (2) serous; (3) purulent; (4) cerumen and cholesteatomata; and (5) fibrinous and hæmorrhagic.

1. Catarrhal products as commonly met with in the nose and naso-pharynx and less frequently in the ear may be either viscid or inspissated to the extent of forming "crusts." Coming from a mucous membrane the fluid consists chiefly of an alkaline solution of mucin, with globulin and serum albumin in proportions varying with the intensity and nature of the morbid process. Epithelial cells in varying degrees of mucoid degeneration, and leucocytes, will be suspended in the fluid, together with varieties of bacteria. Of the organic constituents mucin is readily soluble in weak solutions of alkaline salts, such as bicarbonate of sodium (from 0·5 to 1 per cent.), but insoluble in acids, while cells and serum globulin are soluble in weak solutions of neutral salts, as also the nucleo-albumins of the cells, albumin being soluble in water.

2. Serous discharges rarely call for special removal except when localised. In them globulin occurs in greater proportion than mucin, therefore a neutral saline solution should be selected.

3. Pus will obviously vary considerably according to the conditions of its production and the duration of its retention. It may be thin, viscid, and even solid (caseous), sweet or fœtid. According to Hoppe Seyler the proportions of organic solids in 100 parts of dried pus are: proteids, 13; nuclein, 34; fats and lecithin, 14; cholesterin, 7; cerebrin, 5; extractives, 4; and insoluble substances, 20. Halliburton gives nucleo-albumin, cell globulin, albumoses, and peptones as the chief constituents. In the fluid part or serum globulin with small quantities of serum albumin and albumoses will be found, while the organised solid or cell elements, such as leucocytes, connective tissue fragments, &c., will yield nucleo-albumin, cell, globulin and nuclein, also fats, lecithin, cholesterin, &c., in varying degrees of fatty and other degeneration. All these are soluble in weak solutions of either neutral or alkaline salts respectively.

4. Cerumen may vary from a thin treacly consistence to that of a firm plug, more or less mixed with epidermal squames, hairs, parasites, dust, and other foreign matter. Being fatty in nature it is readily soluble in alkaline salts. But as the duration of contact by an irrigant is so short and the plug oftentimes so dense softening by means of a strong alkaline solution, preferably in glycerine, is often expedient as a preliminary to the douche. Cholesteatomata consist of closely packed laminated squamous epithelium with fatty granules and cholesterin crystals. The cells will yield much keratin and nuclein, both of which with the fatty débris are soluble in alkalies. Sometimes, as in middle-ear suppuration, the epithelium is mixed with pus; if so the neutral salts also should be used in combination.

5. Plastic exudation consisting chiefly of filamentous fibrin entangling leucocytes in its meshes is extremely difficult of solution and rarely admits of more than a softening process by solutions of the neutral and alkaline salts, such as sodium sulphate, calcic hydrate, &c. The same applies to blood-clot, which is, however, less dense and consequently much more readily removed by similar irrigants.

Choice of material for douche.—Knowing the nature of the discharge and the solvents of its chief constituents there will be but little difficulty in selecting an efficient irrigant which shall act both chemically and mechanically. The appended table of reagents in frequent use will facilitate selection. On one side are grouped the solvents, on the other those which either actually precipitate, or at all events do not dissolve, the prevailing constituent of the discharge.

Table of Solvents and Precipitants.

Solvents.	Precipitants.
Sodium sulphate (from 1 to 2 per cent.).	Water (except albumin).
Potassium (from 1 to 2 per cent.).	Mercury biniodide.
Magnesium (from 1 to 2 per cent.).	Mercury perchloride.
Ammonium (from 1 to 2 per cent.).	Alum.
Sodium bicarbonate.	Zinc chloride.
Sodium chloride.	Zinc sulphate.
Sodium hydrate.	Zinc permanganate.
Sodium biborate.	Potassium permanganate.
Sodium sulpho-carbolate.	Hydrogen peroxide.
Calcium chloride.	Formalin.
Calcium hydrate.	Carbolic acid.
Potassium hydrate.	Boric acid.
Potassium carbonate.	Liquor sodii chlorinat.
Chinosol.	Liquor carbonis detergens.
	Izal.
	Alcohol (fats excepted).
	Sulphurous acid.

It will thus be seen that many of the solutions which we most usually employ are not those best adapted to their purpose, since some of them—e.g., the salts of mercury, phenol, boric acid, &c.—actually coagulate or form insoluble compounds with the chief constituents of the discharge, thereby preventing thorough irrigation. One must not ignore, however, the qualification that the duration of contact between the irrigant and the discharge is often so short that either complete solution or complete precipitation of the organic elements can scarcely be expected. Still, it will generally be quite sufficient for the purpose if the matrix is dissolved and diluted so as to facilitate the division and removal of the solid and organised matter—e.g., in the case of "crusts," caseated pus, cerumen, cholesteatomata, &c. This will obviously be more thorough when a solvent of that matrix is employed in preference to a fluid which can at the best act only mechanically. It is scarcely necessary to discuss each agent separately, yet several demand special notice.

Taking water first, this is by no means the most effective irrigant, whether employed as tap or distilled, warm or cold, since of the organic substances albumin is about the only one which it dissolves.

Next in importance are the neutral salts—sodium, potassium, magnesium and ammonium sulphates with sodium and calcium chlorides. These act as solvents of the globulin group but vary in degree and according to the strength of

solution employed. Sodium sulphate is by far the most useful, especially if employed in a strength of from 1 to 2 per cent., but if stronger—e.g., from 5 to 10 per cent. or more—it causes precipitation of proteids. It still further has the property of penetrating organic tissues. This is well illustrated in the action of Müller's fluid (a solution of chromic salts and sodium sulphate) which not only hardens the tissue but penetrates to its deepest part. Should the chromic salts be used alone, however, the hardening is only superficial. This quality is of the greatest value when dealing with a granulating surface and in economising cocaine.[1] Sodium sulphate still further has the valuable property of mixing readily with biniodide and other salts of mercury in efficient antiseptic strengths. Calcium chloride, although not quite so good a solvent, is particularly useful as a hæmostatic douche, since calcium salts play an indispensable part in the blood coagulation. Sodium carbonate is perhaps the best solvent of mucin which forms by far the chief organic substance in catarrhal secretions, it is also a solvent of nucleo-albumins, fatty materials, nuclein, keratin, &c.; its strength should be about 0·5 per cent. The same remarks apply to borax (sodium biborate), which salt has the additional advantage of possessing some antiseptic properties. Its strength should be from 0·5 to 1 per cent. Sodium, potassium, and calcium hydrate are valuable chiefly for their softening action upon the tissues and are not applicable as douches except in very weak solutions since they form a glutinous compound with albumins known as Lieberkühn's jelly, familiar to us in the well-known "ropy" or "gelatinous" reaction between pus and liquor potassæ. The first and second are useful when combined with glycerine for softening ceruminous and epidermal plugs as a preliminary to irrigation. Chinosol does not precipitate and mixes well with the neutral salts, but decomposition occurs when combined with alkalies. Distilled water is preferable to tap water.

We will now consider the behaviour of the opposite group, which apart from their purely passive and mechanical action in very weak solutions are either actual precipitants or at all events do not dissolve the matter which they are employed to remove. As before mentioned, pure water precipitates the globulins and has no solvent action upon fats; used alone therefore it is not an entirely efficient douche. The salts of zinc—sulphate, chloride and sulphocarbolate and permanganate—are chiefly used for their astringent properties, since they form insoluble compounds with the proteids and should only be used as astringents. The same applies to alum and to potassium permanganate. The latter salt may be mixed with sodium bicarbonate or biborate and forms an excellent douche for removing fœtid crusts in the nose and naso-pharynx. Boric acid is perhaps one of the most favoured douche agents, probably owing to its supposed antiseptic qualities, but, unfortunately, it is not a solvent of proteids and therefore does not conform to our essentials. Carbolic acid (phenol) is a powerful precipitant of the proteids; it should therefore be mixed with solutions of sodium sulphate or carbonate, when it will prove a more efficient douche. Care must always be taken that the solution is complete, otherwise the phenol will be simply suspended and will obviously cause much irritation, even pain, especially when used as a nasal douche. Imperfect solution can be avoided by using the best preparations of phenol (absolute or No. 1 carbolic acid) by boiling, by using the above salts, or by diluting glycerine of carbolic acid (P.B.). Formalin is now very popular as a douche but it is a very powerful precipitant. Peroxide of hydrogen, unless freely diluted, has the great disadvantage of causing rapid effervescence when mixed with pus. This is extremely awkward when irrigating a cavity such as the maxillary sinus. Izal and liquor carbonis detergens are not only precipitants but have the further disadvantage of being emulsions and opaque, so interfering with diagnostic evidence. They are also toxic and very irritating to the mucous membranes and require great care in their use. Finally, the inorganic salts of mercury—the perchloride and biniodide—are most powerful precipitants, readily forming insoluble compounds with albumins and globulins.

In addition to its purely mechanical use a douche may be required for antiseptic purposes. But our most valuable antiseptics are precipitants of proteids and therefore not thorough irrigants; consequently, it is more often expedient to irrigate first with a solvent and use the antiseptic afterwards, as in the case of suppurative middle-ear disease. This need not, however, always be done, since biniodide of mercury, phenol, chinosol, and many powerful antiseptics are not only miscible with pure sodium sulphate but when mixed the solution does not precipitate proteids so readily as a plain solution of the antiseptic would. This is a property of no slight importance. In the use of potassium permanganate where there is much mucin, as in the crusts found in atrophic rhinitis, a combination with sodium bicarbonate or biborate will be found to afford a very efficient deodorant douche with or without sodium sulphate. Boric acid is so feeble an antiseptic, even by itself, that its combinations need no serious consideration. This, however, does not apply to chinosol which, mixed with sodium sulphate, affords not only a clear solution but one having high solvent and antiseptic properties. Its great disadvantage is its cost. Sanitas also mixes well with the neutral salts and its efficiency is markedly increased.

It will thus be seen that few reliable antiseptics when used by themselves actually conform to the essentials of a perfect douche, but when combined with a neutral salt their efficiency is undoubtedly increased, this being due in a great measure to an increase in penetrative power.

A protesting word may here be not superfluous with regard to many popular formulæ combining thymol, eucalyptol, menthol, and other aromatics with various inappropriate salts which are employed as antiseptic douches. These are not only extremely irritating to the mucous membrane—especially the nasal—sometimes causing great discomfort, but their solvent and antiseptic properties are so problematical that they should only be recommended as deodorants and in those cases which demand stimulating as an adjuvant to the routine solvents—e.g., atrophic rhinitis. When available an economical and efficient douche in cases of atrophic and fœtid rhinitis is to be found in sea-water. It should be thoroughly well boiled, decanted, and used at a temperature of about from 60° to 70° F. A pinch of sodium bicarbonate to the pint may be added when the crusts are very firmly adherent. When employed for diagnostic purposes the douche should be transparent and colourless, hence liquor carbonis detergens, creolin, izal, permanganates, &c., are to be avoided. Likewise, too, it is inadvisable to employ any precipitant such as mercuric chloride for exploratory irrigation when the exit passage is likely to be minute—e.g., per Leichwitz cannula in the case of suspected maxillary sinus disease.

Although far from complete the foregoing selection may be considered as fairly representative of the materials frequently employed as douches, and however true it may be that experience eventually leads us to select that which is most serviceable the application of our knowledge of physiological chemistry will doubtless not only facilitate that selection but also guide us to still further improvements. While disclaiming any intention of suggesting a universal irrigant, experiments in the laboratory and clinical observation amply emphasise the fact that we have in the neutral salts, especially sodium sulphate, by far the most reliable basis for an irrigant, especially when pus predominates, but in many instances already referred to the addition of an alkaline salt will render it even more effective. Whatever formula be employed it must obviously be modified according to the clinical circumstances calling for its use and efficiency will be ensured by practically appreciating the teachings of the physiological laboratory.

The appended formulæ are based upon the foregoing principles, having all been thoroughly tested chemically and clinically, and although selected chiefly for use in connexion with diseases of the ear and upper respiratory tract they are equally applicable to general surgery.

Formulæ.

1. Sodium sulphate, from one and a half to three drachms; water to one pint (20 fluid ounces), from 1 to 2 per cent.

2. Sodium sulphate, from one and a half to three drachms; sodium bicarbonate, 40 grains; water to one pint.

3. Sodium sulphate, from one and a half to three drachms; borax, 40 grains; water to one pint.

4. Sodium sulphate, from one and a half to three drachms; sodium bicarbonate, 40 grains; glycerine of carbolic acid, 45 drops; water to one pint.

Note.—Instead of glycerine of carbolic, absolute phenol nine grains or No. 1 carbolic acid may be used. Heat to 155° F.

5. Borax, 40 grains; bicarbonate of soda, 40 grains; glycerine of carbolic acid, 45 drops; water to one pint (diluted Dobell's solution).

[1] THE LANCET, Dec. 8th, 1900, p. 1679.

6. Sodium sulphate, one and a half drachms; chinosol, 10 grains; water to one pint.

7. Sodium sulphate, one and a half drachms; sanitas, three fluid drachms; water to one pint.

8. Sodium sulphate, one and a half drachms; perchloride of mercury, two grains; water to one pint (1 in 5000).

9. Sodium sulphate, one and a half drachms; red iodide of mercury, two grains; sodium iodide, two grains; water to one pint (1 in 5000).

10. Sodium sulphate, one and a half drachms; potassium permanganate, two grains; water to one pint.

11. Sodium bicarbonate, 40 grains; potassium permanganate, two grains; water to one pint.

Note.—Borax (40 grains) may be used instead of sodium bicarbonate.

12. Solution of calcium chloride (P.B.) six fluid drachms; water to one pint.

Notes.—The pure exsiccated sulphate of sodium should always be used in preference to the ordinary crystalline salt. Bicarbonate is preferable to carbonate of sodium. Hot water whenever convenient should be employed to make the solutions. Solutions of phenol should be heated to 155°. No. 1 as a simple irrigant for pus, Nos. 2 and 3 when mucus is present or when the discharge is inspissated, Nos. 4, 5, 10, and 11 for inspissated fœtid mucus or "crusts," Nos. 6, 8, and 9 as antiseptics, and No. 7 and 10 as deodorants. No. 12 is chiefly employed for its hæmostatic property.

Methods of Employment and Instruments.

The selection of an instrument will be guided, first, by the particular purpose for which the douche is to be employed; secondly, whether it is intended for the surgeon's or for the patient's sole use. This distinction is by no means unimportant, knowing how rarely the layman appreciates the possibility of infection and the importance of cleanliness. In this instance he is perhaps not entirely to blame, since the ordinary apparatus at his disposal—e.g., the rubber ball, glass or metal syringes—are without doubt the most dangerous weapons ever employed. An ocular and olfactory, still more an abacterial, examination of the interior of any

Fig. 1.

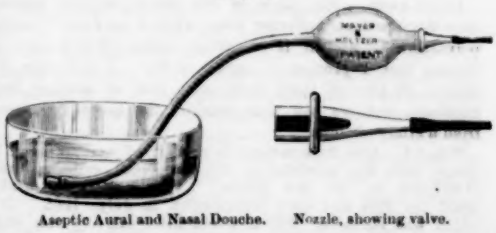
Two-way Syringe.

syringe which has been much used will at once emphasise the truth of this statement. The cause of this is obvious: no apparatus that has to be filled by the aperture which comes in contact with the wound can escape contamination of its interior except through special care which cannot be expected in its domestic employment. In the case of aural and nasal douches the application to the nozzle of a short piece of rubber tubing which can be renewed or removed and sterilised greatly reduces the risk of infection or of injury during self-use. The ordinary form of hydrostatic douche is not liable to infection in this particular way, but it is a somewhat clumsy arrangement and not to be advised for delicate and deliberate work as in aural cleansing, since it admits of but slight variation in volume and pressure.

Dr. J. Dundas Grant's modification of the piston syringe is thoroughly efficient in guarding against septic infection, being fitted with a two-way tap which admits of filling through a separate channel (Fig. 1). This with the ordinary piston glass or metal form is, however, very difficult for the patient to use himself.

The writer's aseptic douche (Fig. 2) will be found specially adapted to this purpose, since the patient not only has force,

Fig. 2.



Aseptic Aural and Nasal Douche. Nozzle, showing valve.

direction, and volume of fluid directly under control, but by means of inlet and outlet valves the irrigator can only be filled at the distal end like a Higginson's syringe, of which it is in fact a modification. It is very wide in its application but is specially valuable in cases of disease of the ear requiring great care in auto-irrigation and those forms of rhinitis demanding a copious douche. The glass nasal douche (Fig. 3) is particularly useful when small quantities only are required.

Fig. 3.

Glass Nasal Douche.

It is as unnecessary to describe in detail all the numerous forms of apparatus adapted to special purposes as it is to enumerate and to condemn all those which do not conform to the most rudimentary principles of cleanliness, but it may not be unreasonable finally to emphasise that no apparatus can be safely employed in which one aperture serves both for filling and for emptying.

Devon and Exeter Dental Hospital.—The twenty-second annual meeting of the subscribers of this institution was held at the Guildhall, Exeter, on April 25th, under the presidency of the sheriff. The report showed that 2778 patients were treated during 1901. The financial statement was satisfactory. The late Mr. R. West had bequeathed £1000 which will be placed to the reserve fund which has been opened for providing new premises for the hospital.

Health of Gloucester.—Dr. J. Campbell, the medical officer of health of the Gloucester Urban Sanitary Authority, in his report for 1901, which has just been published, states that the estimated population at the end of 1901 was 48,473. There were 647 deaths during the year—i.e., 13·3 per 1000, the lowest rate ever recorded for the locality. 1378 births were registered, giving a birth-rate of 28·4 per 1000, the lowest for the past 10 years, this being due in part to the previous under-estimation of the population. 154 deaths occurred in children under one year of age, corresponding to an infant mortality of 111·7 per 1000 born, as compared with an average of 144·8 for the 10 preceding years.

A Clinical Lecture
ON
SEPTIC POLYARTHRITIS.

Delivered at the Manchester Royal Infirmary on Jan. 23rd, 1902,

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GENTLEMEN,—We have in the wards at the present time three patients suffering from what I may call "septic polyarthritis" and it is of certain forms of this class of disease that I propose to speak to-day. I will take the reports of two of these first, with that of another from Scotland, and we can then consider the questions arising from a study of them.

CASE 1.—Our first patient is a married woman, aged 35 years, who was admitted on Oct. 3rd, 1901, suffering from "stiffness of all her joints." She had good health until her first and only confinement in July, 1895. Her child was stillborn. Seven weeks after delivery the small joints of the hands and wrists became swollen, inflamed, and painful, and within four months both great toes had been similarly attacked. She stated that after her confinement she suffered from a continuous purulent vaginal discharge and in 1896 she was for six months in hospital under treatment for this uterine trouble. The discharge, however, continued and towards the end of 1896 her feet and ankles became swollen and inflamed. By June, 1897, the above-mentioned joints had become fixed and about this time the knees, cervical spine, and jaws became acutely swollen, the hips and shoulders were also attacked, and by the close of 1897 she was rendered completely helpless by the general rigidity of her joints. She now had marked thickening of the skin of the soles and palms with desquamation and rapid loss of hair. During 1898 her condition seems to have been unchanged and there was still slight vaginal discharge. In the autumn of 1899 "hot-air treatment" was employed. The vaginal discharge ceased at this time, her condition improved, and she was again able to feed herself. From this date to the time of her admission to hospital she began gradually to improve as regards movements of the jaw, neck, and hands, though she was still bedridden. On admission the general nutrition was fairly good, the movements of the spine showed little impairment, the mouth could only be opened to the extent of one inch, and lateral masticatory movements were abolished. The large joints of the upper extremities were enlarged, their mobility was restricted, and the skin covering them was smooth and somewhat reddened. There was no distinct synovial effusion but marked thickening of the joint structures. There was distinct grating on rotation of the shoulder-joint. The wrists were stiffer than the elbows and movements of pronation and supination were almost lost. Both hip-joints were involved to some extent. Both knee-joints were swollen, indurated, and partially fixed in flexion, the right being stiffer than the left. The ankles were much less affected. The hands and feet were more especially crippled. There was a flabby, toneless puffiness of the backs of the hands and fingers, leaving the knuckles marked by depressions; the phalangeal joints were much stiffened, the terminal ones least so. The feet were in much the same condition as the hands.

For the notes of the next case I am much indebted to Dr. Cowan of New Galloway, N.B., who kindly sent them at my request. I had repeatedly seen the patient at her home in Scotland during annual visits to the neighbourhood.

CASE 2.—The patient, a single woman, now aged 29 years, was a perfectly healthy girl until the age of 24 years and was in service. One day during a menstrual period she had a heavy day's washing and felt cold. The next morning the left knee was swollen and painful. In spite of treatment the knee got worse and she had to leave her place. At this time the disease was thought to be tuberculous. Treatment was continued and after a year she was in the Edinburgh Royal Infirmary for a time and the knee was fixed. The joint was apparently kept at rest in one way or another for many months and then massage was employed. The other knee became painful and swollen and later the fingers of the right hand, the right ankle, and then all the other joints of the limbs in rapid succession. She has been confined to bed for five and a half years and has changed little during the last two years. She has had some inflammation about the toe-nails. Opium was given at one time with apparently good effect, though now she is fairly comfortable without it. "She has now (1902) no motion in any joint and is unable to move any of her limbs in the very slightest." "All that she can do is to move her head and even that motion is limited." "The elbow joints are the most swollen and glossy and often ooze a watery fluid." She has had some irregular menstruation but never any leucorrhœa.

CASE 3.—The third patient is a single woman, aged 22 years. She has a tuberculous family history. When she was about 14 years old she had leucorrhœa which lasted almost without intermission till about 12 months ago. She was admitted to hospital on Jan. 1st, 1902, complaining of pain and swelling in the right ankle. About three years ago the left foot and ankle suddenly became very painful and swollen. She was in bed for three weeks and was quite well in a month. Three or four months later the right foot became swollen and painful and has remained so ever since, though the swelling is not so great as it was. At first the inflammation was acute and the skin was red and hot, but after a few days the active symptoms passed off, only the pain remaining. The wrists and left shoulder have also at times become swollen and painful and the right calf has latterly been much swollen and very tender. The patient is very anæmic. There is a somewhat pulpy swelling pushing forward the extensor tendons of the right ankle; there is also a little œdematous thickening over the malleoli, with slight swelling on either side of the tendo Achillis. Movement is limited and is accompanied by crackling. There are a good deal of pain and tenderness but there is no redness about the joint. There is also pain in the left ankle and left wrist and in the right metatarso-phalangeal joint but no visible change in the appearance of these joints. The right calf is somewhat œdematous and very tender. There was a slight vaginal discharge on admission which ceased after a few days' treatment.

A study of these three cases shows us, first, an affection which attacks many joints though it may begin in a single joint, which lasts for a long time, even years, which may give rise to the most complete crippling, which shows no tendency to cause extensive suppuration or even suppuration at all, which may leave a joint intact, which may subside and recur repeatedly, and which does not give rise to any nodular, bony, or cartilaginous outgrowths, or to hydrarthrosis. In this disease soft parts other than joints may be inflamed and the skin and nails may be apparently the seat of trophic changes. The general health of these patients has not been gravely impaired.

Since it is not perhaps quite generally recognised that these conditions are due to the cause which I assign for them we may consider for a moment what possible relationship they may have. Acute rheumatism may be rejected at once. "Rheumatic arthritis" may be excluded without much difficulty since there are no osteophytic growths or hydrarthrosis and neither the course of the disease nor the implication of non-articular structures would support a diagnosis of this hotch-potch of unclassified joint troubles. A diagnosis of chronic rheumatism does not take us any further; nor does, perhaps, a statement that the condition is a neuropathy. We sometimes see conditions of joints closely resembling these as sequelæ or complications of typhoid fever. We have in the wards now a girl, 11 years of age, who was admitted suffering from acute necrosis of a metatarsal bone after a blow. This child has pain, swelling, and stiffness of her ankles, knees, and hips, with evidence of septic endocarditis, and is clearly suffering from a condition that no one would, I think, hesitate to call acute septic arthritis. I need not describe her case because the condition is well known and familiar and undisputed, but it very closely resembles the others except in the more severe degree of poisoning that exists in this child. The possibility of the mischief being due to syphilis might be considered in one of the cases but not in the others, and it is not, I think, a probable explanation.

[1] Based upon notes of cases taken by Dr. T. L. Fennell, house surgeon, and Mr. A. Hodgkinson and Mr. A. Hodge, dressers, and upon others supplied by Dr. J. Cowan of New Galloway, N.B.

An acute tuberculous joint disease is worth thinking of and I am not at all sure that in Case 3 the ankle is not tuberculous. In some of these cases that I have seen I have been strongly impressed with the possibility of tubercle being a factor and have thought that the mischief might be due to a mixed tuberculous and other process. It will have been noticed that Case 2 was evidently treated as tuberculous at one time.

In May of last year Dr. T. K. Monro of Glasgow published in the *British Medical Journal* an account of one of these cases occurring in a young man after frequent wettings. He refers to a paper by Dr. J. Griffiths in which there is a full discussion of the morbid anatomy of ankylosis, but unfortunately the histories are not in sufficient detail to enable us to draw any certain conclusions as to the etiology of the disease.

Now I have no doubt that all these cases are instances of septic arthritis—i.e., are directly due to absorption of one or other of the ordinary septic organisms from some unhealthy or enfeebled area. We have seen how the condition may be produced as the result of an acute septic periostitis—in the pus taken from this case staphylococci alone were found. There are plenty of records of similar cases in which injury or the depressing effect of cold and wet have lit up acute infective processes. We know of course that gonorrhœal rheumatism, so-called, produces exactly similar conditions and Dr. Griffiths mentions that in three of the cases which he collected gonorrhœa was considered to be the exciting cause of this ankylosing arthritis, and it is quite a familiar fact that without any obvious suppuration septic arthritis is specially likely to end in a stiff joint. I take it, then, that two of these cases are instances of ankylosing leucorrhœal polyarthritis, one in a far advanced and one in an early stage, and that Case 2 is a similar condition due to absorption of poisonous material from the genital tract by reason of disturbance of the menstrual process by cold and fatigue. A menstrual synovitis is mentioned by Barwell who also mentions such a condition arising during pregnancy. One of Dr. Griffiths's cases was also possibly due to disordered menstruation. Dr. E. J. Cave of Bath read a very interesting paper, mentioning various sources of infection, at the meeting of the British Medical Association last year.

We can hardly go so far as König and say that 90 per cent. of cases of acute arthritis are due to urethritis, but I do wish you to carry away with you two ideas. The first is that slight uterine disorders, such as leucorrhœa, very commonly indeed give rise to troublesome joint inflammations which do not get well until the absorption of the poisonous material is checked and that in a doubtful case of joint disease the probability of some such cause should be carefully considered. The second idea is that such cases if neglected may go on to the production of such terrible crippling as we have in two of the cases which I have mentioned, in one of which you have seen the patient. I think that you will often be able to recognise these cases by the peculiar indurated condition of the peri-articular tissues which exists after the acute stage is over if the mischief has been at all severe.

I do not want you to think that there is anything new or far-fetched about what I have said. It is all quite well known but it is not sufficiently remembered in examining cases of joint disease. The channels of absorption of septic material which is specially apt to infect joints perhaps from their close relationship to lymphatic structures, such as serous sacs, are manifold. The conjunctiva (Lucas), the digestive tract, the bladder, &c., as well as those which I have mentioned to you to-day, have all been shown to be liable to act as paths for the entrance of septic material to joints; and the same thing is probably true as regards septic bone diseases.

As to treatment I will not say much to-day. The great point, of course, is to get rid of the septic focus as quickly as possible. As regards the joints, rest and soothing applications at first, with massage, inunction of oleate of mercury, and a course of iodide of potassium later, are probably the best measures. In these, as in most cases of stiff joints, active movement is of much more value than is passive movement. I exclude, of course, in this statement the question of localised adhesions.

Though in one of the patients "hot-air treatment" was credited with a great deal I am inclined to think that the cessation of the leucorrhœal discharge was a much more important factor in the improved conditions. The great thing is to recognise the cause of the mischief.

THE DIAGNOSIS OF MALARIA FROM THE STANDPOINT OF THE PRACTITIONER IN ENGLAND.[1]

BY PATRICK MANSON, M.D. ABERD., F.R.C.P. LOND., C.M.G., F.R.S.

SLIPSHOD diagnosis is not to be commended. We must confess, however, that so far as the interests of patients are concerned, in the vast majority of diseases, provided the physician abstain from a too active interference with natural processes, it matters little whether diagnosis be exact or even correct. In too many diseases we possess little or no power for good. Fortunately for the reputation of our art there are a few diseases over which we can exercise absolute or relative control; and just because we possess in the case of these remediable diseases this power it is of the utmost importance that we recognise them—that we diagnose them accurately. The disease about the diagnosis of which I propose to offer a few remarks this evening—malaria—is one of these. For it in quinine we possess an almost infallible remedy. Hence if we fail to recognise malaria when it is present, and in consequence of such failure in diagnosis omit to administer the appropriate remedy, the patient suffers and we grossly fail in duty. Contrariwise, if in some given case we erroneously diagnose malaria and treat the patient accordingly we certainly treat the case wrongly, perhaps miss the chance of cure by more appropriate means, waste a valuable drug, and certainly run the risk of damaging our own reputation. The ability to diagnose malaria is therefore a matter of high practical importance.

In those countries in which malaria is endemic and common it not infrequently happens that the infection is overlooked. As a rule, however, it is the other way about; malaria is far too frequently assumed to be present where it has nothing whatever to do with the case. This remark is equally, if not more, applicable to certain cases of disease which come to England from abroad. Such is the exaggerated idea of the insalubrity of tropical countries, of the universal prevalence of malaria in them, that a very large proportion of the febrile and even non-febrile diseases coming from them to this country are diagnosed and treated as malarial. It happens far too often, both in England and in the tropics, that the practitioner when in difficulties about a tropical patient assumes the case to be malarial. The patients likewise are very prone to be content with, and to endorse, such a diagnosis, for they, too, from one cause or another have come to believe that in the matter of disease "tropics" spells "malaria." Somehow, to many there seems to be a sort of fascination and appropriateness about the word "malaria," as if it carried with it mystery, romance, and explanation such as is said to belong to the blessed word "Mesopotamia." In the course of 12 years' experience of London practice I have seen some two or three cases only in which malarial infection had been overlooked. In the same time I have seen a very large number of cases in which malaria had been diagnosed but in which malaria was neither present nor had anything whatever to do with the symptoms. The latter type of case I meet with so frequently that I thought, when asked to read a paper before this society, I could not do better than choose for my subject this very practical matter of the diagnosis of malaria as we find it when imported into England.

Whatever may have been the difficulties in the way of reliable diagnosis of the infection in the past, recent discovery has enabled us to be precise and absolutely sure about it—at all events in 99 cases out of 100. There are few diseases so easily diagnosed; nevertheless, although nearly every member of the profession knows in an academic sort of way the principles on which the points of diagnosis are founded, my experience tells me that these principles are not applied systematically or in actual practice assessed at their proper value. Possibly it may serve some useful purpose if, availing myself of this opportunity, I recapitulate

[1] Delivered before the Medical Society of London on May 12th, 1902.

and accentuate these principles. The pathognomonic indications of malarial infection may be conveniently arranged under these headings: (1) the clinical; (2) the therapeutic; and (3) the microscopical.

1. *The clinical diagnosis of malaria.*—There are many signs and symptoms of malarial infection—fever, anæmia, icteric tinting of skin and scleræ, enlargement of the spleen and liver, gastro-intestinal disturbance, and a tendency to spontaneous recovery and to subsequent recurrence. All or any of these may lead one to suspect, but not one of them, nor the concurrence of all of them, justifies a positive diagnosis of, malaria. None of them and no grouping of them is pathognomonic. They are present separately or variously combined in many other morbid conditions. They may justify in any given case a suspicion, but not a diagnosis, of malaria.

There is only one clinical symptom that justifies a positive diagnosis. This is periodicity—periodicity of a particular type—tertian or quartan periodicity—a rhythmical recurrence of symptoms every 48 or 72 hours. In no other morbid condition are these to be found and wherever they are well marked malaria is present.

In malarial disease the appearance of quotidian periodicity is common enough but it is only the appearance. It is very doubtful if true quotidian periodicity ever occurs in malaria. If it does it is certainly very rare. The parasites of malaria are either tertian or quartan in habit and many of the symptoms which they give rise to are correspondingly tertian or quartan in their recurrences. Multiple infection by two kinds of parasites or by two or three generations of the same series of parasite may give rise to double tertian or treble quartan infection with diurnal recurrence of symptoms, but this pathologically, whatever it may be clinically, is not a true quotidian periodicity. It is common enough in malaria but I would insist that it is not pathognomonic of malaria, for a similar quotidian periodicity is very general—in fact, it is usual—in almost all febrile complaints. Therefore, to make quotidian periodicity a ground for a diagnosis of malaria is wrong. More than that, it is most dangerous and is, perhaps, the commonest cause of erroneous diagnosis of malaria. Experience has made me formulate a rule for myself which I commend to you—have absolute confidence in tertian and quartan periodicity as a basis for a diagnosis of malarial infection, but distrust, or rather absolutely disregard, quotidian periodicity.

In tropical practice I have seen more mistakes from relying on quotidian periodicity as a ground for diagnosing malaria than from any other cause. The temptation to attach weight to it is often very strong but I would again urge on you to harden your hearts against it.

When a patient from the tropics comes to you with a story of evening rigor, rise of temperature to 103° or perhaps 104° F., and a profuse sweat the idea of malaria naturally presents itself. Most probably the patient tells you that he has malaria. And if one finds the patient anæmic and that his spleen is large—perhaps very large—the diagnosis of malaria seems to be clinched. But people abroad get splenic and spleno-medullary leucocythæmia and other diseases in which the spleen is enlarged as well as people in England, and such patients often have marked quotidian fever. These leucocythæmic and other kinds of enlarged spleen cases I frequently see on the supposition that they are malarial. Had the patients never been abroad probably the idea of malaria would never have been entertained.

Another type of case in which there is enlargement of the spleen associated with anæmia and quotidian fever I occasionally see, probably because it, too, is sometimes supposed to be malarial. In a sense the cases I refer to are malarial—or, rather, post-malarial. I allude to what is known in Assam where the condition in certain districts is very common and very fatal—as Kala azar. The same condition occurs in other malarious countries, however. The patient gives a history of malarial attacks which at first were controlled to some extent by quinine. After a time the recurring attacks became more frequent and less amenable to quinine. Finally, the fever resisted treatment, became quotidian, the spleen becoming permanently enlarged, the anæmia intense, the skin sallow or even melasmic, and ultimately, in spite of treatment, the patient, if not cut off by some intercurrent disease, dies from pure anæmia. This disease, although possibly induced by malaria, has long ceased to be malaria—it is, in fact, a post-malarial cachexia brought about by organic changes in the blood organs and induced possibly by some additional and distinct infection attacking organs already damaged by antecedent malaria. I find that the presence of enlarged spleen is a bait that few resist when attempting the diagnosis of a quotidian fever in a patient from the tropics. The combination is so suggestive. But we must bear in mind that many people in the more malarious districts in the tropics have, though free from active malarial disease, chronically enlarged spleen, and we must also bear in mind that the possession of an enlarged spleen is no protection against other diseases and that enlarged spleen is symptomatic of many diseases, febrile and other. I have several times seen ulcerative endocarditis in patients with spleens enlarged from antecedent malaria in coincidence merely. The same occurrence I have often seen in phthisis and in many septic conditions.

If quotidian fever associated with enlargement of the spleen is to be distrusted as a combination indicative of malaria, still more so is quotidian fever associated with enlargement of the liver. The latter combination usually means abscess of the liver. Anyone who has had much experience of tropical practice must know that this disease is often, I might say generally, at all events in the earlier stages, diagnosed malarial fever. Osler says he had seldom seen an abscess of the liver in which the patient had not been liberally dosed with quinine. This is my experience likewise. Strange to say, syphilis, both secondary and tertiary, is not infrequently, on the strength of an associated quotidian fever and a residence or visit to a malarious country, diagnosed malaria. Septic absorption of pent-up pus is a well-recognised cause of quotidian fever not unfrequently attended with marked rigor and diaphoresis. Sometimes the most careful examination fails to determine the situation of the pus. Now if suppuration of this description occurs in an individual who has resided in malarious countries the case is almost sure to be diagnosed malaria. I have seen many such cases. Pyelitis, catheter fever, pylephlebitis, empyema, phthisis, middle-ear disease, elephantoid fever, the fever of early leprosy, the fever sometimes associated with gall-stones—these and many similar conditions occurring in patients from abroad, because they are accompanied by an ague-like quotidian fever and because they occur in individuals who have been abroad, are constantly being diagnosed malaria and treated as such. Therefore I say in approaching the diagnosis of a pyrexia in a possible malaria while regarding tertian and quartan periodicity as absolutely conclusive attach no weight whatever to quotidian periodicity.

2. *The therapeutic diagnosis of malaria.*—Whatever may be the case in certain malignant infections in tropical countries quinine, properly given, so far as my experience goes, never fails to arrest a malarial attack occurring in this country, and this within 48, or at most 96, hours of its administration. Therefore a periodic or remitting fever that persists after adequate dosing with quinine, say for four days, is not malarial. Everyone believes, or says that he believes, in the anti-malarial virtues of quinine, but it is strange how little confidence some practitioners have in its diagnostic value. Thus I frequently see in consultation patients with fever presumed to be malarial who have been taking quinine in large doses for weeks or even months, and yet no suspicion about the correctness of diagnosis had been entertained. When asked to see a case of supposed malarial fever of a persistent nature my first question usually is, "Has the patient taken quinine, for how long, and in what doses?" If I am told, as is often the case, that he has had large doses for many days I feel sure, without seeing the case, that it is not one of malaria. In this country if any of you are called on to treat a fever you suppose to be malarial, and if this fever resists quinine properly given and in full doses for three or four days my advice to you is to revise your diagnosis; the fever is not malarial. I could quote many cases in illustration; it is hardly necessary to do so.

There are two important matters, however, which require to be attended to in applying the quinine test. First, the dose must be adequate. Second, the quinine must be absorbed. In many instances quite an insignificant dose will check an ague. Many years ago while in practice in the island of Formosa I ran short of quinine and had to economise my very limited stock. With this object I experimented to ascertain the minimum dose that would check an ague and ultimately came down to half a grain three times a day. My Chinese patients in several instances said that

they were cured by this insignificant amount—so potent is quinine in some cases of malaria.

This winter I had in hospital a patient suffering from double benign tertian infection. By a properly timed small dose of quinine it is sometimes possible to eliminate in such a case one group of the parasites without injuring the other group and so to convert a quotidian ague into a tertian. I wished to demonstrate this to the students at the School of Tropical Medicine. I gave the patient three grains of quinine an hour or thereabouts before an expected paroxysm. Small though the dose was it killed out, not only the group of parasites which I proposed to eliminate, but the other group as well, and cured for the time being the patient.

Quinine as against the malaria parasite is a very potent drug but for reliable diagnostic, as well as for therapeutic, purposes it must be administered in much larger doses than those I have just mentioned. I would say that if a fever in this country resists 10 grains of quinine given three times a day for four days it is not malarial.

The dose of quinine should not only be adequate but we must assure ourselves that it is absorbed. I am quite certain that many of the failures to control malaria by quinine are attributable to neglect of this essential. A catarrhal state of the gastric mucous membrane is usual in severe malarial attacks; such a condition is very unfavourable to absorption. Persistent vomiting is also common enough; food and drugs are alike rejected. To get the therapeutic action and diagnostic value of quinine in such circumstances the drug must be given hypodermically or by enema.

Quinine nowadays is often given in tablet or coated pill form—a most dangerous method in serious cases and a most unsatisfactory one for diagnostic purposes. For some time quinine tablets have not possessed the flint-like hardness that used to characterise them a few years ago; they are now more soluble, but even lately twice I have seen them fail to be absorbed. In one case the patient developed a severe malarial attack on his way home from the Gold Coast. He took quinine tablets and persisted in their use after his arrival in London. So much quinine did he take in this way without benefit that both the patient and his medical attendant lost confidence in the drug and the patient came very near dying. Three or four intra-muscular injections of the acid hydrochloride broke the fever and the patient quickly recovered. In giving quinine, therefore, whether for therapeutic or for diagnostic purposes we should assure ourselves that it is absorbed.

3. *Microscopical diagnosis of malaria.*—Of the three means for diagnosing malaria this is the most satisfactory provided it is undertaken by one with large experience. A negative result by the amateur is valueless: a positive result is not much more to be trusted. It takes a large amount of practice to be able to recognise all forms of the malaria parasite or to discriminate between them and vacuoles in the red corpuscles in fresh films, or dirt in dried and stained films. Articles in the medical papers by amateurs in malarial blood examination sometimes supply amusing reading. The frequency with which such writers encounter malarial rosettes and flagellated bodies and free flagella, forms of the parasite least frequently met with, is very suggestive. Free pigment—in reality, dirt—they often see. White blood corpuscles I have known described as malarial parasites, blood platelets as spores or sporulating parasites, and cotton fibres or fibrin as flagella. No one without some knowledge of the histology of normal blood and much experience of microscopical examination of malarial blood should attempt to write on the subject of the malarial parasite, much less attempt responsible diagnosis of malaria with the microscope. The thing is easy enough when one has been properly taught and after large experience. Then the microscope is invaluable in diagnosis, but those who have not been so taught and who have not had much experience are eminently unreliable—they are often worse than useless. Therefore, for the majority of medical men, if they wish to have blood examined for the purpose of diagnosis in regard to the presence of a possible malarial infection, the services of an expert are necessary. But although he may not be able himself to diagnose malaria with the microscope every medical man should know how to prepare blood films suitable for such an examination. Very singular notions are entertained about this. I have sometimes had blood sent me in capillary tubes such as are used to hold vaccine. I have also had sent me blood so thickly smeared on a slide that the preparation would not transmit light. I have also had sent me from a distance an ordinary slip and cover-glass wet preparation with a request to examine it for malaria. Blood transmitted in any of these ways is useless. Unless the fresh blood can be examined at the bedside or within an hour or thereabouts of preparation dried films should be made and subsequently transmitted to the laboratory for fixing, staining, and microscopical examination.

There are many ways of preparing malarial blood-films. I have tried most of them. The best, I believe, is that described by Dr. S. R. Christophers and Dr. J. W. W. Stephens or some modification of this. An ordinary microscope slip is carefully cleaned with alcohol. The patient's finger-tip or the lobe of his ear is similarly cleansed. The finger or the ear is then pricked with a clean and rather long ordinary sewing needle. A drop of blood is pressed out and, as it may contain epithelial débris, wiped away. A second but very minute drop of the size of a large pin-head is then expressed and touched lightly (the skin must not be touched) with the clean surface of the slip about an inch from the one end. Immediately the shaft of the needle is laid transversely on the droplet of blood so transferred to the slip. After waiting a second or two for the blood to run out by capillarity between the surface of the slip and the needle, the latter, held between finger and thumb, is drawn along the surface of the glass. In this way with a very little practice a beautifully fine and even film is produced. Half a dozen such films should be prepared. The single prick suffices as the films can be made very rapidly one after another. After they have dried they should either be wrapped in very clean tissue paper or placed in a dust-free slide-box and transmitted to the laboratory. Here they are fixed with alcohol (five or ten minutes) and subsequently stained and examined.

For purposes of diagnosis I use either borax methylene blue or dilute carbol thionine. These are very reliable stains, keep well, act rapidly, and give sufficiently good results. Undoubtedly one of the several modifications of Romanowsky's stain when successful gives a more brilliant picture, but they are somewhat unreliable, and unless the particular sample of stain employed is in frequent use and known to be good this method is not advisable for ordinary purposes of diagnosis. Leishman's modification of the Romanowsky method gives very beautiful results and has the advantage of not requiring a preliminary fixation of the blood with alcohol, but it, too, has the objection of unreliability in ordinary clinical conditions. Malarial blood should not be fixed by heat.

In stained films, or in fresh blood, it is practically always possible to find the parasite, at all events in those cases of malarial infection that come to England. But this only on one condition, and this condition I would impress on you—the patient must not have taken quinine recently. You may find certain forms of the parasite—the crescent, for example—after full dosing with quinine, but the usual fever-causing forms, as a rule, rapidly disappear after administration of the drug. Therefore, if you wish to have a reliable microscopic diagnosis in supposed malarial fevers do not give quinine, or suspend its use for some time, before preparing the blood slides.

In rare instances and at certain times in a considerable proportion of cases the parasite, or its product melanin, even in severe infections may not be detectable in the peripheral blood, and, as I have mentioned, even small doses of quinine therapeutically in sufficient doses may cause its disappearance temporarily or in the case of cure for good. Even in these circumstances it would seem that the microscope may be relied on for a diagnosis.

It has been known for some years that during and for some time after malarial attacks the leucocytes are greatly diminished in proportion to the red blood corpuscles. The diminution, however, is principally in the polymorphonuclear and lymphocytes, so that there is a relative increase in the large mononuclears. Dr. Christophers and Dr. Stephens, fixing their attention on this point, have marked out a method by which it is possible to give a fairly reliable diagnosis of actual or recent malarial infection and this no matter whether quinine has been administered or not. The increase in the mononuclears they state is principally during the apyretic intervals setting in as soon as temperature begins to fall. They say in a report to the Royal Society that "an increase beyond 15 per cent. is proof of an actual or recent malarial infection." Captain L. Rogers, I.M.S., after a very careful investigation of the point, endorses[2] this

[2] Brit. Med. Jour., April 5th, 1902.

opinion. He concludes: "An increase in the large mononuclears to about 12 per cent. and upwards, especially during the remissions of the temperature, strongly indicates malaria."

Dr. C. W. Daniels, superintendent of the London School of Tropical Medicine, has paid a great deal of attention to this point. In reply to a request for a statement of his views he writes: "Leucocytic variation after malaria.—In all forms of malaria after and to a smaller extent during the fever the large mononuclear leucocytes are relatively increased to the other leucocytes. This increase may be slight and in certain cases has been so slight that they only formed 15 per cent. of the leucocytes. Commonly after malaria they vary from 25 to 30 per cent. and occasionally are over 40 per cent. The increase does not seem to be dependent on the species of parasite, or the number of parasites present during the acute attack, or on the severity of the symptoms or sequelæ. It is maintained for a period varying in different cases from two or three weeks to at least as many months and slowly diminishes. It is not affected by quinine either in large or frequently repeated doses. With some exceptions it affords a satisfactory proof of the probable recent presence of parasites. In normal blood it is rare to find more than 12 per cent., though I have seen as high a percentage as 16. In typhoid and Malta fever I have seen a similar increase but it is exceptional. It is said to occur in small-pox. In certain diseases, particularly scurvy, there is also a marked increase but in this disease there is also leucocytosis and a more marked increase in the lymphocytes. The absence of this variation is of more value as a diagnostic point than its presence. As far as I have worked with the method the only exceptions I have seen were when an intercurrent disease, such as pneumonia, which is associated with increase in the polymorphonuclear elements, also occurs. In other cases it has shown itself to be a reliable method for the exclusion of recent malaria. Working for three sessions with classes of students of 20 odd, many of whom coming from the tropics have suffered from malaria, this test has readily discriminated those of the students who have recently had malaria from those who have not. It has proved of value in differentiating cases of yellow fever from malaria (Low and Gray in St. Lucia). It has proved of value in differentiating the hyper-pyrexial fever of West Africa from malaria (Sims, Congo). Though not of the same value as the presence of parasites or of pigmented leucocytes or recent pigment in the organs, it is of much higher value as a test of recent malaria than splenic tenderness or enlargement and is of particular importance in cases where either in the natural course of events or after the administration of quinine there are no characteristic symptoms. It is probably of about the same value as the agglutination test in typhoid with moderate dilutions of the serum, say, 1 in 20. The main objection to the method is the difficulty that is sometimes present in deciding which are large mononuclears and which are lymphocytes. After actual practice this difficulty is small and a column for undecided or doubtful leucocytes will be found useful at first. After a short time this will be in the majority of cases little used. In these determinations, however, there is a certain personal equation so that counts made by different individuals vary within small limits." These are Dr. Daniels's opinions and being based on large experience I attach much value to them.

We sometimes get assistance in concluding for or against malaria from considerations of time and locality. It is very commonly believed that a malarial infection may last a lifetime. Thus the old Indian, many years after he has come home for good, may tell us that he has recurrences now and again of a jungle (that is, malarial) fever contracted in youth. I do not believe in the malarial nature of such attacks. I have never been able to find the parasite in any such case. My belief is that malarial infection does not persist after three years from the date of invasion—of course, a patient can become reinfected, that is another affair; but I do not think the duration of any given infection exceeds three years. I will not be positive about this. We want more observations. But in my experience a malignant tertian tends to die out in from 18 months to two years, a benign tertian in about from two to two and a half years, and a quartan in about three years. We know that other protozoal organisms having asexual and sexual phases require resuscitation by passing through the sexual phase every now and again; otherwise they become extinct. I believe the same to be the case with the malarial parasite. Other people besides the old Indian get feverish colds and different kinds of short febrile seizure, but because they had never been in India or Africa they call them influenza or what not. Had the old Indian never been to India he would do the same. He is rather proud of his jungle fever and sticks to it longer than it sticks to him. While alive to the possibility of my being wrong in my belief I am inclined to regard any fever which occurs three or more years after the patient has been away from the possibility of fresh malarial infection as non-malarial. If a patient has never been to a malarial country he cannot get malaria unless by artificial or abnormal means. In the malarial belt there are many non-malarial places—Malta, for example. A chronic or recurring fever from Malta in a person who has not visited a malarial place is probably Malta fever or enteric fever, certainly not malaria. Similarly, Barbados is not malarial. Therefore a chronic or recurring fever in a patient from Barbados who has never visited a malarial place cannot be malarial—most probably it is the fever symptomatic of some of the lesions in filariasis so common in Barbados. Commonly enough, because such fevers are ushered in by severe rigor these filarial fevers are locally known as "ague." This is a misnomer; they have nothing to do with malaria.

I have a good many reputedly malarial patients from the fen districts and other formerly malarious spots in England. On critical examination not one of them has turned out to be malarial. They were assumed to be malarial because there was some periodicity about the fever, perhaps enlarged spleen, and because they came from localities which were formerly malarious. I have never seen a case of indigenous English malaria. I believe the plasmodium has died out in England like the wolf and the wild boar.

In concluding these rambling and disconnected, but I trust practical, remarks I would again impress on you the importance of a thorough reliance on these three classical methods of diagnosing malaria: the clinical—tertian and quartan periodicity; the therapeutic—the curative effect of quinine; and the microscopical—the detection of the parasite or its products in the blood and the characteristic leucocytic variation. A thorough and intelligent application of one or all of these methods seldom, if ever, fails to lead to a correct diagnosis for or against malaria. At the same time I would warn you that although a positive diagnosis of malaria may be indicated in some given case the presence of malaria does not exclude other diseases. On the contrary, malaria often predisposes to other infections. Similarly, the explosion of a latent malaria is favoured by other infections, especially typhoid fever and tuberculosis.

REMARKS ON THE SUBSEQUENT HISTORY OF CHILDREN BORN WHILST THE MOTHER WAS INSANE.

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WHILST engaged upon an inquiry in 1900 into the causes of idiocy and imbecility I incidentally came into contact with a considerable number of women who, whilst actually suffering from an attack of insanity and under detention in an asylum, had given birth to children, and it occurred to me to trace, if possible, the subsequent history of these children. This seemed all the more desirable because, as far as could be gathered, no special attention had previously been given to the subject, although an impression prevailed generally amongst asylum medical officers that most of the children so born were illegitimate and stillborn (which impression the inquiry showed to be erroneous). Further, it was hoped that information bearing upon the subjects of heredity and maternal impressions might also be obtained. Want of time prevented me from proceeding with the inquiry then but it has now been completed and the results are given in this paper.

It was first of all necessary to obtain some idea of the number of children born under these conditions, and even a simple inquiry of this kind was by no means an easy matter owing to the absence in many asylums of any special record of births. However, through the kindness of the medical

superintendents of the London County Asylums at Cane Hill, Colney Hatch, and Claybury I eventually obtained a list of 121 women who had given birth to children whilst under treatment in those institutions.

My object was to ascertain whether the mental and physical development of these children were in any way abnormal and, if so, whether any connexion could be traced between such abnormality and the condition of the mother during pregnancy. For this, data of three kinds were necessary—viz., (1) of the subsequent history of the child; (2) of the age, variety and duration of insanity of the mother; and (3) of the family history of both parents. In each of these directions great difficulties presented themselves. The children having been passed on to the workhouse or to friends were particularly difficult to trace; many of the mothers had either died in the asylum or, having recovered from the attack of insanity, had been discharged and lost sight of; and the class from which pauper lunatics are drawn being of pronounced migratory habits it will be readily understood that the difficulty of obtaining a satisfactory family history of the father was even greater. However, by personal inquiries, correspondence, and industrious searching through the case-books a large number of accurate details were finally obtained. But unfortunately it frequently happened that where a good account of the child was forthcoming up to a considerable age the particulars of the parents were defective, and *vice versâ*, so that the determination to include only those cases in which full data were obtainable led to a great reduction of the material and by the time the cases were put together the 121 originally started with had dwindled down to 38 (13 males and 25 females). It is to be regretted that it was not possible to gather together a larger number but considering the nature of the inquiry this was perhaps only to be expected and it is believed that the extreme care which has been taken to insure accurate and complete details will in a great measure compensate for the paucity of material. The results obtained, moreover, are so uniform and they corroborate so completely my observations while investigating the causes of idiocy and imbecility that I do not think that a larger number of figures would affect the deductions.

THE CHILDREN.

First of all, then, let us consider the subsequent history of the children. With regard to their mental and physical condition they readily fall into two groups: (1) those who are alive and of good mental and bodily development, of whom there are 13; and (2) those who are dead or are mentally affected, of whom there are 25. The healthy children comprising the first group have, with one exception, been traced beyond the age of two years, so that they fairly may be considered as having arrived at the stage at which any pronounced marks of degeneracy or mental or physical abnormality would have shown themselves; indeed, the larger number of them are now going to school and are to all appearances bright, intelligent, and normal in every way. In the second group, those dead or mentally affected, all are as a matter of fact now dead, although some of them lived long enough to show definite signs of mental abnormality. Further, close examination shows that the majority in this group succumbed quite early in life, as is seen from the following figures:—

Stillborn		3
Died under the age of	1 month	5
,, ,,	2 months	7
,, ,,	3 ,,	4
,, ,,	6 ,,	1
,, ,,	1 year	2
,, ,,	2 years	1
,, ,,	3 ,,	2
Total		25

It is thus shown that no less than 22 out of the 25 children were dead before the first year. This, then, gives an infant mortality (under one year of age) of 22 out of 38, or 580 per 1000, amongst children born whilst the mother was insane—truly an alarming figure when we remember that the infantile mortality in the most thickly-populated parts of London averages only 225 per 1000[1] and is in many parishes much less, and the conclusion would naturally be that the mental condition of the mother does indeed have a very important effect on the subsequent condition of the child; such a view, however, as will immediately be seen, requires very considerable modifications.

THE MOTHERS.

Turning now to the mother, it has to be ascertained whether any connexion exists between her age, the variety of insanity, the length of time the attack has lasted, the presence of any morbid heredity as revealed by her family history, and this abnormally high mortality of the children. The age of the mothers varied from 18 to 46 years. The variety of insanity was generally mania or melancholia (mania predominating), but general paralysis, delusional insanity, and primary amentia also occurred. In some cases the attack had first made its appearance when the pregnancy was approaching its termination, in others it had existed since the fourth month. After a very careful examination into each of these possible factors I have come to the conclusion that no connexion whatever can be traced between any of them and the subsequent condition of the child. This indeed appears to be more closely related to the number of attacks of insanity through which the mother has passed or to their nature as regards recovery or otherwise, since in those instances in which previous attacks have occurred or where the insanity has become chronic the percentage of unsatisfactory children is much greater. It must, however, be remembered that recurrent attacks of insanity are more often associated with a morbid heredity and this brings us to the consideration of the family history, in which I believe the true explanation of this high mortality lies.

MORBID HEREDITY.

In order to study the influence of morbid heredity upon the child the family history of both parents must be inquired into, though since we are studying cases in which the mother is actually insane it obviously follows that the maternal antecedents of these children are much more likely to be tainted than the paternal. I have found it the most convenient plan to arrange the cases in five groups dependent on the degree of morbid heredity present, as the effect upon the children can then more readily be observed. These five groups are as follows:—

TABLE I.—*Showing the degree of Morbid Heredity present.*

CLASS A.—MORBID HEREDITY NEGLIGIBLE (10 children living and four children dead).

Group I.—Eight Children Alive and Four Children Dead.

Mother.—Insanity present in the child's mother only, her antecedents and collaterals being healthy.
Father.—*Nil.*

Group II.—Two Children Alive.

Mother.—In addition to the child's mother being insane, insanity or epilepsy is also present in her brothers or sisters but the antecedents are healthy.
Father.—*Nil.*

CLASS B.—MORBID HEREDITY WELL MARKED (three children living and 21 children dead).

Group III.—Three Children Alive and 13 Children Dead.

Mother.—In addition to the insanity of the mother it is present in *one* previous generation of either her maternal or paternal ancestors.
Father.—*Nil.*

Group IV.—Four Children Dead.

Mother.—In addition to the insanity of the mother it exists in either *two* preceding generations on one side or in *both* her maternal and paternal ancestors.
Father.—*Nil.*

Group V.—Four Children Dead.

Mother.—Any of the preceding groups.
Father.—Insanity, alcoholism, or phthisis strongly marked.

It will be seen that in the first group, save the actual insanity of the mother, there is no morbid heredity (by which I mean insanity, pronounced alcoholism, or phthisis). In the second group insanity is present in the collaterals of the mother, but the most searching inquiry fails to find it or other injurious influences in her antecedents, the child's paternal antecedents being also untainted. I think that we may therefore place these two groups together in one class and consider that in them the morbid heredity is practically *nil*. In this class there are 14 cases,[2] of whom 10 are at present alive and apparently perfectly normal, and four are dead; of these four, however, one was quite healthy until the age of two and a half years when he succumbed to bronchitis, so that it is open to question whether this child should not really be placed in the satisfactory group of children; and in two others of these four

[1] Ninth Annual Report of Medical Officer of Health of the County of London, 1900.

[2] Actually there are only two cases in Group II., as against 12 in Group I.

TABLE II.—A SYNOPTICAL TABLE SHOWING THE RELATION OF MORBID HEREDITARY INFLUENCES TO THE SUBSEQUENT HISTORY OF THE CHILD.

The Numbers in the Squares refer to the Cases.

—	Children alive and of normal mental and bodily condition, traced as far as the age stated.				Children dead at the age stated.							
Class A.—No morbid heredity.	1 9 years.	2 4 years.	5 7 years.	7 4 years.	14* 3 weeks.	21 3 months.	22* 2 months.	43† 2½ years.				
	8 2 years.	27 7 years.	29 4½ years.	32 3 years.								
	40 13½ years.	41 15 years.	Total, 10.								Total, 4.	
Class B.—Morbid heredity present.	6‡ 2 years.	10 5 years.	20‡ 3 months.		34 Under 2 years.	4 3 weeks.	9 2 hours.	11 3 months.	15 7 weeks.	16 Stillborn.	17 2 months.	18 1 hour.
					22 2 months.	24 1 month.	26 6 weeks.	31 2 months.	33 6 months	34 7 months	35 2 months.	36 10 weeks.
			Total, 3.		37 Immediately after birth.	38 Stillborn.	42 3 months.	44 9 months.	45§ 3 years.		Total, 21.	

* Mother strongly alcoholic; no heredity; defective vitality of child probably due to mother's *physical* condition. † Died from bronchitis; previously normal. ‡ Slight heredity on mother's side only (Group III.). § Died from disease of the brain. ‖ Died from wasting disease of the brain.

children the insanity of the mother was brought about by excessive indulgence in alcohol (in one case assisted by semi-starvation), so that I think it is justifiable to conclude that in these the diminished vitality and early death of the child may really be attributed to the *physical* state of the mother during the ante-natal period, especially as I have elsewhere shown[3] that the physical state of the mother during this period exerts an important influence upon the child.

The next three groups (Groups III., IV., and V.) may likewise be placed together in one class, in which morbid heredity is present. In Group III. insanity exists in a previous generation of either the paternal or maternal ancestors of the child's mother; in this group there are 16 children, three of them being alive and 13 dead. In Group IV. insanity exists in either two preceding generations on one side or in *both* the paternal and maternal ancestors of the child's mother; in this group there are four cases, all the children being dead.

In none of the above groups is there any morbid taint on the child's paternal side.

Lastly, in Group V. are placed those cases in which, in addition to the insanity of the mother, well-marked morbid heredity is transmitted to the child through its *paternal* progenitors, and in this group, therefore, I regard these hereditary influences as being at their maximum. Here also there are four children, all being dead.

So that, briefly to summarise these results, we find that in Class A, in which morbid heredity may be considered to be absent, there are 14 children, 10 of whom are alive and four dead; and in Class B, in which such heredity is present, there are 24 cases, three of the children being alive and 21 being dead. The accompanying table emphasises these points and shows also the period up to which each child was traced (Table II.).

It has been mentioned that some connexion seems to exist between the subsequent history of the child and the number of attacks of insanity from which the mother has suffered or their nature as regards recovery or otherwise. That this, however, is due to the fact that recurrent attacks, or insanity which passes into a chronic and incurable condition, are usually those in which strong predisposition exists is readily seen from Table III. In it are two groups—viz., (1) the mothers who have been discharged recovered; and (2) those who have either died insane in the asylum or have become chronic lunatics. The letters A and D refer to the condition of the child as being alive or dead, the figures underneath denoting the number of the case.

TABLE III.—*Showing the Relation of the Mother's Heredity to her Subsequent History as regards the Attack of Insanity.*

—	No morbid heredity in the mother's antecedents.	Morbid heredity present in the mother's antecedents.
Mother discharged recovered.	A. A. A. A. A. 1 7 27 40 41 D. 21 Total 6.	A. A. 10 20* D. D. 26 35 Total 8.
Mother died insane or became a chronic lunatic.	A. A. A. A. A. 2 5 8 29 32 D. D. D. 14† 28† 43‡ Total 8.	A. 6* D. D. D. D. D. D. D. D. D. D. 3 4 9 11 15 16 17 18 22 24 D. D. D. D. D. D. D. D. D. 31 33 34 36 37 38 42 44 45 Total 20.

* Heredity only slight. † The mother's insanity due to alcohol. ‡ The child died at the age of two years and six months from bronchitis; previously healthy.

From this table it is seen that out of the 14 mothers in whom no hereditary predisposition occurred six were discharged as recovered (five children being alive and one dead), whilst eight either died insane or passed into a condition of chronic insanity (five children alive and three dead), whereas out of the 24 mothers in whom hereditary predisposition occurred only four were discharged recovered (two children alive and two dead) and 20 died insane or became chronic lunatics (one child alive and 19 dead). I think that this clearly shows that although a large number of mothers may become insane during pregnancy in the absence of any hereditary taint and that in many of them the in-anity is not recovered from, the condition of the child is not thereby influenced but is only related to the presence or absence of morbid heredity. Whether these

[3] Amentia, its Causes, Varieties, and Pathology. Archives of the Claybury Pathological Laboratory, vol. ii. (in the press).

TABLE IV.—ABSTRACT OF CASES.

No. of case.*	Mother.					Heredity.			Child.		
	Years of age at birth of child.	Mental condition on admission.	No. of attack.	No. of pregnancy.	Result.	Child's maternal side.	Child's paternal side.	Group No.	Sex.	Conditions of birth.	Subsequent history.
1	46	Melancholia.	First.	Tenth.	Discharged recovered six months after the birth of the child.	*Nil.*	*Nil.*	I.	F.	Normal.	Nine years old; at school; bright and intelligent.
2	25	Epilepsy with mania; fits since childhood.	,,	Third.	Still in an asylum six years afterwards; frequent fits; becoming demented.	,,	,,	I.	M.	,,	Four years old; alive and well.
3	36	Melancholia.	,,	Ninth.	Still in an asylum four years afterwards; chronic mania with occasional epilepsy.	Epilepsy and phthisis on the maternal side.	,,	III.	F.	Illegitimate.	Died under two years of age. "Something the matter with the brain."
4	34	Mania of six weeks' duration due to alcohol.	,,	Fifth.	Still in an asylum four years afterwards with chronic mania.	Epilepsy and alcohol on the maternal side.	Alcoholism and phthisis.	V.	M.	Normal.	Died, three weeks old.
5	24	Mania.	,,	Second.	Still in an asylum seven years afterwards with chronic mania and delusions.	*Nil.*	*Nil.*	I.	F.	,,	Seven years old; at school; bright and intelligent.
6	44	Melancholia (had had epileptic fits three and a half years previously.)	,,	Tenth.	Still in an asylum two years afterwards; melancholia with frequent epileptic fits.	The mother's father's mother insane.	,,	III.	,,	,,	Two years old; apparently healthy.
7	26	Mania of two months' duration.	,,	First.	Discharged recovered five months afterwards.	The mother has a sister and a brother insane and a sister epileptic.	,,	II.	,,	,,	Four years old; at school; bright and intelligent.
8	40	Mania.	,,	Fifth.	Still in an asylum seven years afterwards; chronic mania with delusions.	The mother's brother has fits; nothing otherwise.	,,	II.	,,	,,	Alive and well up to two years of age; cannot be traced further.
9	27	,,	,,	First.	Still in an asylum twelve years afterwards; chronic mania; becoming demented.	The mother's sister insane. Insanity on the maternal side.	Alcoholism strongly marked.	V.	,,	,,	Died in two hours.
10	21	Melancholia.	,,	,,	Discharged recovered two months afterwards.	Insanity.	*Nil.*	III.	,,	Illegitimate.	Five years old; at school; bright and intelligent.
11	35	Recurrent mania; first attack 17 years ago.	Fifth.	Seventh.	Still in an asylum four years afterwards with recurrent mania.	Said to be nothing.	Insanity and alcoholism strongly marked.	V.	,,	Normal.	Died, three months old, from consumptive bowels.
14	37	Mania; an attack of insanity induced by starvation and alcohol.	First.	(?)	Still in an asylum 10 years afterwards; chronic mania with delusions.	*Nil.*	*Nil.*	I.	,,	,,	Died, three weeks old, from diarrhœa, vomiting, and emaciation.
15	27	Melancholia.	Third.	(?)	Passed into a state of chronic mania and died from dysentery four years after the birth of the child.	Insanity and alcoholism on the paternal side.	,,	IV.	M.	,,	Died, seven weeks old, from weakness.
16	31	Melancholia; attacks of insanity with the previous pregnancies.	Sixth.	Sixth.	Discharged on petition of the husband five months after the birth of the child.	Insanity on the maternal side.	,,	III.	,,	Stillborn.	—
17	42	Melancholia.	Second.	(?)	Still in an asylum four years afterwards; chronic mania; becoming demented.	Insanity.	,,	III.	,,	Premature.	Died, under two months old.
18	39	Melancholia, with general paralysis; fits for four years; slightly mentally affected previously.	(?)	Seventh.	Died from general paralysis five months after the birth of the child.	,,	(?) Syphilis.	III.	F.	Normal.	Only lived one hour.
20	22	Melancholia.	(?)	(?)	Discharged recovered three months afterwards.	The mother's mother insane.	*Nil.*	III.	,,	,,	Alive up to the age of three months; cannot be traced further.

TABLE IV.—ABSTRACT OF CASES—(*continued*).

No. of case.*	Mother.					Heredity.			Child.		
	Years of age at birth of child.	Mental condition on admission.	No. of attack.	No. of pregnancy.	Result.	Child's maternal side.	Child's paternal side.	Group No.	Sex.	Conditions of birth.	Subsequent history.
21	22	Mania of five months' duration.	Second.	(?)	Discharged recovered one year afterwards.	*Nil.*	*Nil.*	I.	M.	Illegitimate.	Died, three months old, from marasmus.
22	36	Recurrent mania (alcoholic).	Fourth.	(?)	Still in an asylum four months afterwards.	Insanity.	,,	III.	F.	,,	Died, two months old, from gastric catarrh.
24	(?)	Recurrent melancholia.	(?)	(?)	Still in an asylum one year afterwards; condition unchanged.	,,	,,	III.	,,	Premature, seven and a half months.	Died, one month old, from asthenia.
26	25	Melancholia.	(?)	(?)	Discharged recovered four months afterwards.	Alcoholism strongly marked.	,,	III.	M.	Normal.	Died, six weeks old, from inanition.
27	37	Mania.	Second.	(?)	Discharged recovered one month afterwards.	*Nil.*	,,	I.	,,	,,	Seven years old; in good mental and bodily health.
28	29	Recurrent mania (alcoholic and epileptic).	,,	(?)	Still in an asylum five years afterwards; becoming demented.	,,	,,	I.	F.	,,	Died, two months old.
29	41	Recurrent mania.	Fourth.	(?)	Still in an asylum four years afterwards; condition unchanged.	,,	,,	I.	,,	,,	Four years and three months old; in good mental and bodily health.
31	23	Melancholia.	First.	(?)	Still in an asylum one year afterwards.	,,	Insanity strongly marked.	V.	,,	Illegitimate.	Died, two months old, from marasmus.
32	39	Mania of six months' duration.	,,	Seventh.	Gradually became demented and died three years afterwards.	,,	*Nil.*	I.	,,	Normal.	Three years old; alive and well.
33	(?)	Mania of recent duration.	,,	(?)	Died five days afterwards from convulsions and coma. (Left cerebral hemiatrophy present—congenital.)	Insanity.	,,	III.	,,	,,	Died, six months old, from pneumonia.
34	(?)	Mania.	Third.	Third.	Still in an asylum four years afterwards; chronic mania with delusions.	,,	,,	III.	M.	,,	Died, seven months old.
35	30	,,	First.	(?)	Discharged recovered two years afterwards.	,,	,,	III.	F.	,,	Died, two months old.
36	28	Congenital imbecility.	,,	(?)	Died one month afterwards from septicæmia.	,,	,,	IV.	,,	Illegitimate.	Died, 10 weeks old.
37	30	Melancholia.	,,	(?)	Still in an asylum five years afterwards; becoming demented.	,,	,,	III.	,,	Normal.	Died almost immediately after birth.
38	18	Congenital imbecility.	,,	(?)	Still in an asylum four years afterwards; imbecility with mild mania.	,,	,,	III.	,,	Illegitimate; stillborn.	—
40	26	Mania.	,,	First.	Discharged recovered four months afterwards.	*Nil.*	,,	I.	M.	Normal.	13 years and nine months; good mental and physical health.
41	(?)	Melancholia.	,,	(?)	Discharged recovered three weeks afterwards.	,,	,,	I.	,,	,,	15 years; in good mental and physical health.
42	27	Mania.	,,	(?)	Died two months afterwards from organic disease of the brain.	Insanity.	,,	III.	F.	,,	Died, three months old, from consumptive bowels.
43	32	Delusional insanity.	,,	Sixth.	Still in an asylum four months afterwards; chronic mania.	*Nil.*	,,	I.	,,	,,	Died, two years and five months old, from bronchitis.
44	(?)	Mania.	,,	(?)	Still in an asylum five years afterwards.	Insanity and alcoholism.	,,	IV.	M.	,,	Died, nine months old, from consumption.
45	(?)	,,	,,	First.	Still in an asylum three years afterwards.	Insanity.	,,	IV.	,,	,,	Died, three years old, from wasting of the brain.

* The missing numbers are those of cases which are not included owing to the particulars being imperfect.

children in later years evince any special tendency to become insane I am unable to say and it is doubtful whether a sufficient number of children could be followed far enough in life to enable this question to be satisfactorily answered. It is, however, abundantly clear that up to the age at which it has been possible to trace them they in no way differ from ordinary children. This fact is of considerable interest in connexion with "maternal impressions," for it would be difficult to conceive of a more profound mental change than is frequently present in the insanity of pregnancy, ranging as it does from the most violent and acute mania to a melancholia almost approaching stupor and yet, as has been seen, the child may be perfectly normal.

Many authorities hold the view that the mind of the mother *is* capable of exerting an influence upon the developing embryo, but I cannot but think that the facts here given are strongly opposed to any such view, and, as far as my own personal experience goes, all that I can say is that in the investigation of nearly 200 cases of idiocy and imbecility I was unable to find evidence in a single instance of the operation of any such influence, although it must be admitted that such was frequently alleged.

On the other hand, it is plainly evident that when a strong morbid heredity exists the vitality of the child is so much impaired that its chances of surviving more than a few months are small, and I am convinced that this morbid hereditary influence plays a very important part in the degeneration of the offspring and finally culminates in either idiocy or extermination.

Incidentally it may be noted that abnormalities of parturition do not occur with any greater frequency in these cases than in the outside population. Three children were stillborn and one was born prematurely, but the remaining 34 births were normal in every way and of the whole 38 only seven were illegitimate.

In view of the preceding facts I do not see what other conclusions can be drawn than that (1) the mental and physical condition of the child is in no wise influenced by the mere fact of the mother being insane during pregnancy; (2) neither is the condition of the child influenced by the variety of insanity, the duration of the attack, or the age of the mother, nor even directly by the number of attacks from which the mother may have suffered; but that (3) *this condition is directly dependent upon the presence or absence of morbid hereditary influences.*

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LIQUID AIR AS A FREEZING MEDIUM IN THE LABORATORY.

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FOR the past month or so I have been using liquid air instead of ether as a freezing medium in the laboratory at the Bethlem Royal Hospital and I have found the advantages to be so great and the results so satisfactory that I have no hesitation in commending its general use to other pathologists.

Liquid air is obtained by mechanical compression of ordinary atmospheric air to one eight-hundredth of its volume and by removal of the impurities by fractional solidification. It is a fluid like water in appearance but of lower specific gravity. It boils at a temperature of − 312° F. and therefore at the temperature of the atmosphere when placed in ordinary vessels. It evaporates, however, quite slowly when stored in the vacuum flasks used by the manufacturers. An untouched gallon evaporates from the storage flask in about six weeks. In ordinary constant use in the laboratory a gallon lasts a little longer than a fortnight. Liquid air is therefore very much cheaper than ether for laboratory purposes. Further, it acts much more rapidly than ether—about from 20 to 30 compressions of the indiarubber bulb are always sufficient to freeze the gum and the tissue remains frozen much longer. On the other hand, tissues are not destroyed by liquid air-freezing more than by ether-freezing. Lastly, the unpleasant smell of ether is done away with and instead thereof a supply of pure air issues from the microtome. I have had an opportunity of inspecting the impurities removed from the atmosphere in the process of manufacture of liquid air and have observed that the stench from these is worse than that from the worst London fog. I regard this supply of pure air as most important; it makes pathological work much more pleasant and healthy. When working with liquid air the best method of ventilation for the laboratory is to shut all the windows and ventilators and to be satisfied with the pure air issuing from the microtome. It is no exaggeration to say that after a morning's work in the laboratory with liquid air I have felt as if I had been for a blow in the country.

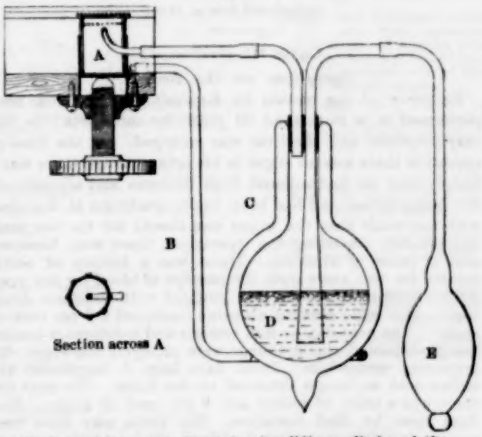
The vacuum flasks in which the liquid air is stored are made of glass and each consists practically of two flasks one

FIG. 1.

A Cathcart microtome is shown on the left. The brass attachment supporting the vacuum flask is seen in the centre of the figure. The valvular indiarubber bulb is on the right. (From a photograph.)

inside the other with a vacuum between the two. For use with a Cathcart microtome a support for one of the flasks is a necessary attachment. This attachment is shown in Fig. 1.

FIG. 2.



Sectional view. A is placed in the sliding cylinder of the microtome. The nozzle is shown on the right of this. B, brass support for, C, vacuum flask containing, D, liquid air. E, rubber bulb.

The inner sliding cylinder of the microtome also requires some modification. It should be of smaller diameter than is usual in the Cathcart microtome and should be fitted with vertical strips of brass. This device is necessary for purposes

of partial insulation and also to diminish the risk of the cylinders freezing together. A transverse section of the inner cylinder is shown in the small figure to the left of Fig. 2.

A simple nozzle is fitted into the side of the cylinder and is turned up so as to play on the under surface of the plate. An indiarubber cork with two holes is fitted into the vacuum flask. Through one of these holes (the left in Fig. 2) is a glass tube passing from the vapour above the liquid to a piece of indiarubber tubing attached to the nozzle of the microtome. This indiarubber tubing freezes hard when the microtome is in use and thus forms a further support for the flask. Through the other hole in the cork passes another piece of glass tubing one end of which dips below the surface of the liquid air while the other is attached to the valvular indiarubber bulb. It is necessary for this piece of glass tubing to be expanded at the lower end which dips into the liquid air. The whole apparatus is worked on the same principle as a Junker's chloroform inhaler. By means of the valvular indiarubber bulb ordinary air is blown through the liquid air. The liquid air is vaporised and plays on the under surface of the plate of the microtome. As the atmospheric air passes into the liquid air the moisture condenses from the former on the inner surface of the glass tube which soon becomes blocked with ice unless it be dilated as recommended above and as shown in Fig. 2.

The above apparatus may be seen at work at Mr. Charles Baker's, 244, High Holborn, London, W.C., and is sold by him for 30*s*. The present form of Cathcart's microtome as modified for use with liquid air is sold for 15*s*. Liquid air is to be obtained for 2*d*. per gallon from the Liquid Air Power and Automobile Co., Limited, 29A, Gillingham-street, Pimlico, London, S.W.

In conclusion, I ought to say that I can personally lay no claim to any originality in connexion with the above. The idea of using liquid air for freezing in the laboratory is due to Dr. T. B. Hyslop, superintendent of the Bethlem Royal Hospital, and the mechanical adaptation of Cathcart's microtome for the purpose is due to Mr. Hans Knudsen of the Liquid Air Power and Automobile Co., Limited, to whom I now tender my warmest thanks for his kindly interest and generous assistance.

Bethlem Royal Hospital, S.E.

SOME OF THE SURGICAL ASPECTS OF GLYCOSURIA AND DIABETES.

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(*Concluded from p. 1316.*)

CLASS III. (*continued*).

Operations on the Rectum.

EXCISION of the rectum by Kraske's operation has been performed on a man, aged 60 years, for carcinoma; he was very corpulent and his liver was enlarged. At the time of operation there was no sugar in his urine, though there was a history that he had suffered from diabetes and albuminuria five years before and had been under treatment at Karlsbad with the result that the sugar was absent for the two years immediately preceding the operation; there was, however, still a trace of albumin. There was a history of rectal trouble for two years with the passage of blood for one year. After excision the wound was plugged with iodoform dressings. The same evening his urine contained 2·4 per cent. of sugar. The next day he was restless and iodoform poisoning being suspected the dressings were changed, the sugar disappearing meanwhile. Three days later it reappeared and iodine was no longer detected in the urine. The next day there was a trace of iodine and 4 per cent. of sugar. Four days later he died comatose. The coma may have been uræmic in origin, as opium had been administered every two hours and his kidneys were unsound. Desprès records the removal of hæmorrhoids with the écraseur, the patient recovering. The percentage of sugar was from 0·8 to 1·5.

In connexion with these cases must be considered a case recorded by Wallace, of a man, aged 72 years, who underwent excision of the rectum for carcinoma. The wound became very foul after a few days. Simultaneously sugar appeared in his urine and reached 2376 grains in 24 hours. This fell to a trace in a month. The highest temperature recorded was 101° F. Wallace considered this to be temporary glycosuria. The patient was lost sight of afterwards. (*Vide* Table VII.)

Operations on the Extremities.

A large popliteal aneurysm was excised by Trendelenburg. The patient was a man, aged 64 years. Ether was administered and the operation was done with the aid of Esmarch's bandage; it lasted 60 minutes and there was much bleeding on removal of the bandage. He had much pain on recovery from the anæsthetic. The next day his condition was good. On the third day, however, his temperature rose to 103·2° F. and there was slight ptosis on the right side. Later on the same day he became unconscious. A search for sugar was now made for the first time; 6·7 per cent. was found; a slight fruity odour was observable. That evening his temperature rose to 104·3°; the next morning he died comatose. Post mortem a dilated heart, emphysema, and atheromatous arteries were found.

At St. Bartholomew's Hospital the superficial femoral artery was ligatured for a left popliteal aneurysm by Mr. Howard Marsh. The patient was 34 years of age and he had contracted syphilis seven years previously. Sugar was found in his urine for the first time on the day of operation (? before or after the operation). 13 days later sugar was still present. He was discharged a month later surgically well; no mention of diet is made. 14 months later he was admitted under the care of Sir Lauder Brunton with well-marked diabetes (the urine was of specific gravity 1040, the amount was six pints, and it contained 13·8 per cent. of sugar; the total amount present per diem before death was 7262 grains). He died comatose. This was probably a case of diabetes throughout, though Fort's case must be remembered of diabetes the result of an anæsthetic. (St. Bartholomew's Hospital Male Surgical Register, 1896, vol. iv., No. 1696.)

In 1900 Mr. H. T. Butlin amputated the right hand of an engine-driver for epithelioma. He was 45 years of age and was a big corpulent man. On admission his hand was swollen on the inner side and the skin was red, smooth, and painful. His temperature was 97·6° F. and his urine was of specific gravity 1028 and contained 5 per cent. of sugar. The swelling was explored under an anæsthetic and a sinus was found; a piece was removed for microscopical examination. This proving to be epithelioma an amputation was performed through the wrist. Gas and ether were administered on each occasion. All carbohydrates were withheld from his diet. He was quite free from pain the next few days but his temperature gradually rising to 100° on the fourth day the wound was dressed and sloughing of the flaps was discovered. The sloughs separated gradually and on his discharge the wound had practically healed. The following table shows the state of the urine:—

Date.	Amount		Specific gravity.	Percentage of sugar.	Total amount of sugar.	
	in ounces.	in cubic centimetres.			Grains.	Grammes.
June 5th.	—	—	1028	2·0	—	—
,, 6th.	60	1705	1030	5·0	1311·6	85·18 (Operation.)
,, 12th.	43	1221	—	8·3	1563·6	101·53 (Operation.)
,, 14th.	75	2129	1032	5·0	—	—
,, 20th.	58	1641	—	4·0	1011·0	65·65 (Slough.)
,, 21st.	56	1590	1030	4·5	1101·8	71·56
,, 26th.	60	1703	1030	4·3	1138·6	73·94
,, 29th.	66	1874	1027	2·5	716·1	46·50

On July 4th, 5th, and 9th only traces of sugar were discovered. The ferric chloride reaction was never present. The percentage of sugar in this case was high and did not materially diminish until the sixteenth day in spite of diet; it eventually became a mere trace. The euphoria during the period of sloughing is noteworthy. He was readmitted in

February and in March, 1901, for removal of enlarged epitrochlear and axillary glands. On the second occasion there was about 1 per cent. of sugar present; the ferric chloride reaction was absent. There was, moreover, no acetone as shown by Legal's test. These two operations were quite successful. (St. Bartholomew's Hospital Male Surgical Register, 1900, vol. iv., No. 1479; and 1901, vol. iv.) (Personally observed.)

Three primary amputations on diabetics have been performed with two deaths. Verneuil amputated the foot of a man, aged 52 years, by Roux's method for a crush received the evening before from a wagon wheel. The patient had recovered from the shock of the accident and was willing and ready for the amputation. Hæmorrhage was troublesome during the operation; 24 hours later stupor appeared; chronic diabetes was now discovered to be present (with 3·8 per cent. sugar in his urine) and he died comatose. The stump was quite healthy. This case is quoted by Becker as an example of coma precipitated by an anæsthetic.

In St. Bartholomew's Hospital a primary amputation through the upper third of the leg was performed on a woman, aged 60 years, for a compound fracture in the middle third. On the third day the flaps were gangrenous. A charcoal poultice was applied and sugar and albumin were found in her urine. She died on the ninth day. Post mortem a line of demarcation was present; the arteries were very atheromatous. In the third case the inner four digits of the foot were removed by Hache for

TABLE VII.—OPERATIONS ON THE RECTUM.

No.	Sex and age.	Reference.	Disease.	Operation.	Result.	General treatment.	Remarks.
1	—	Desprès.	Hæmorrhoids.	Removal by écraseur.	Recovery.	—	Sugar in the urine from 0·8 to 1·5 per cent.
2	Male; 60 years.	Hoffa.	Carcinoma recti.	Kraske's operation.	Plugged with iodoform dressings. Coma. Death.	—	Sugar absent for two years (had suffered from diabetes for five years). The urine contained albumin. Signs of iodoform poisoning. Reappearance of the sugar after operation. Coma; ? due to uræmia, as much morphia was given after the operation and the kidneys were unhealthy.
3	Male; 72 years.	Wallace.	Carcinoma recti.	Excision.	Recovery.	—	The wound became sloughy a few days after the operation. The urine now contained 2376 grammes of sugar in the 24 hours which fell to a trace in a month. Highest temperature 101° F. ? Diabetes. ? Glycosuria due to sepsis.

TABLE VIII.—OPERATIONS ON THE EXTREMITIES.

No.	Sex and age.	Reference.	Disease.	Operation.	Result.	General treatment.	Remarks.
1	Male; 64 years.	Becker (Trendelenburg's case).	Popliteal aneurysm.	Excision.	On the fourth day coma. Death.	—	Ether was the anæsthetic. On the appearance of the symptoms of coma 6·7 per cent. of sugar was discovered.
2	Male; 34 years.	Marsh (St. Bartholomew's Hospital Surgical Register, vol. iv., 1896).	"	Ligature of the superficial femoral.	Recovery.	—	Sugar was discovered on the day of the operation (? before). 14 months later the patient was re-admitted to the hospital and he died from diabetic coma.
3 a.	Male; 45 years.	Butlin (St. Bartholomew's Hospital Surgical Register, vol. iv., 1900, 1901).	Epithelioma of the hand. Ulcerated.	Amputation at the wrist.	Sloughing of the flaps (painless). Recovery.	General treatment adopted.	The sugar varied from 8·3 per cent. to *nil*. A stout patient. No ferric chloride reaction.
3 b.	—	—	Enlarged gland at the elbow. 1901.	Excised.	Recovery.	—	A trace of sugar. No ferric chloride reaction.
3 c.	—	—	Enlarged axillary glands.	"	"	—	About 1 per cent. of sugar. No ferric chloride reaction.
4	Male; 52 years.	Verneuil, quoted by Becker.	Crushed foot.	Amputation of the foot. Roux's method.	Much hæmorrhage. Coma. Death.	—	Chronic diabetes; 3·8 per cent. of sugar. Stump healthy. (?) Coma due to anæsthetic.
5	Female; 60 years.	St. Bartholomew's Hospital Surgical Register, vol. iv., 1887.	Compound fracture of the middle third of the leg.	Primary amputation in the upper third.	Sloughing of the flaps. Death on the ninth day.	—	Sugar and albumin present. Atheromatous arteries. Line of demarcation.
6	—	Hache.	Fracture of the four outer metatarsals.	Partial amputation of the foot.	Recovery.	—	—
7	—	Reynier (with Dr. Fourrey).	Sarcoma of the size of an orange on the dorsum of the foot near the root of the great toe.	Removed.	"	—	—

fracture of the metatarsal bones. The operation was quite successful. Reynier has recorded the successful removal of a sarcoma of the size of an orange from the dorsum of the foot. Seven patients have thus been operated upon with three deaths, the actual number of operations performed on these seven patients being nine. The percentage of patients recovering was 57·1 and the percentage of successful operations was 66·6. (*Vide* Table VIII.)

Fractures in Diabetes.

The statement has been made that in diabetics fractures do not unite properly, non-union or delayed union being the rule. The original paper on the subject I have been unable to find and therefore cannot run to earth the data on which it was based. Several cases, however, have been published in support of this view but their number is very small (being five in all). Against this view are three cases treated at St. Bartholomew's Hospital in which the fractures united in quite a normal manner. Two other cases were also admitted during the last 20 years. Both patients, however, died, one after a primary amputation and one from sepsis from an empyema complicating fractured ribs. (In connexion with this it is interesting to note that Naunyn in his monograph on diabetes states that he has never seen an empyema complicating that disease nor has he found any reliable observation by others of such an occurrence. Furthermore, he states (p. 330) that suppurative inflammation of serous membranes is very rare in diabetes.) Legendre also records a normal result in a fracture of the humerus. Rather full details are appended of these cases of fractures as the subject is one of considerable importance.

CASE 1.—A man, aged 51 years, sustained a fracture of seven ribs from the passage of a wheel over his chest. On admission there was extensive surgical emphysema; his urine contained 5 per cent. of sugar. He was much collapsed and suffering great pain and his breathing was very rapid. Six days later he was dieted and put upon codeine. He was discharged 27 days after the accident surgically cured. There was, however, still 3 per cent. of sugar in his urine.

CASE 2.—A man, aged 40 years, fractured several ribs by falling on his right side. On admission to St. Bartholomew's Hospital he was much collapsed and there was surgical emphysema over the right lumbar and thoracic regions. On the day of the accident much sugar was discovered in his urine and a history of thirst, excessive appetite, and progressive loss of strength was elicited. On the eighth day a needle was introduced into his right pleural cavity and pus was discovered. A rib was excised, the chest wall being found infiltrated with pus. He died on the sixteenth day after the accident. The amount of urine passed was from 30 to 50 ounces but no quantitative estimation of sugar seems to have been made nor is there any mention of the diet employed.

Both these were severe injuries which might have proved fatal in a healthy subject, yet one patient recovered without there being any noticeable delay.

CASE 3.—A man, aged 58 years, was admitted to St. Bartholomew's Hospital with a sub-trochanteric fracture of the right femur. His urine on admission contained much sugar; its specific gravity was 1038. Sugar persisted for three weeks to reappear again later as a mere trace. He left the hospital from six to seven weeks after the accident with the fracture quite united. No mention is made of any special medical treatment.

CASE 4.—A pronounced diabetic, aged 55 years, was admitted with a Pott's fracture. The fracture united well without any delay. He was subsequently transferred to a medical ward for his diabetes.

Legendre records a fracture of the surgical neck of the humerus from direct violence in a woman, aged 60 years, who suffered from intermittent diabetes. Union was complete in four weeks and two months later her arm was as useful as before. During treatment glycosuria was intermittent but there was a large increase in the nitrogenous excretion.

An interesting history is published by Spitzer of a professor, aged 46 years, a very intellectual man, who had been under his care for diabetes since 1895. The total daily amount of sugar was reduced by diet from 12 to 25 grammes to from five to 10 grammes and the daily excretion of ammonia was one gramme and under. Acetone and aceto-acetic acid had always been absent. On June 27th, 1899, he was seen and his urine contained 0·8 gramme of ammonia in the 24 hours and 18 grammes of sugar (0·9 per cent.). There was no albumin and no ferric chloride reaction was given. On the 29th about 11 A.M. he fell and fractured his clavicle at the junction of the inner and middle thirds. At 3.30 P.M. he had a sensation of tightness about his chest. His urine from the 29th to the 30th measured 5·1 litres, containing 245 grammes of sugar (4·8 per cent.). Sodium bicarbonate was now given by mouth and by rectum (70 grammes in all per diem). He improved until July 3rd, when he became rather restless. His urine was now strongly acid and gave the ferric chloride reaction. He was excreting 2·1 grammes of ammonia despite alkaline treatment. He became steadily worse and died on the 6th comatose. Oxybutyric acid was apparently absent throughout. This case is particularly interesting on account of the coma obviously induced by trauma and on account of the increase in the ammonia and the possibility of giving an unfavourable prognosis.

An account has already been given of the compound fracture for which amputation was unsuccessfully performed. Smith and Durham quote three cases in which the fracture took from four to five months to consolidate and two in which non-union occurred. On the death of one of the latter patients some nine months later from an accident a false joint was found with much provisional callus; nevertheless, the arm was quite useful.

Several cases of transitory glycosuria after fractures have been recorded, the most interesting being Renard's case, where owing to the absence of pain sugar was suspected and found to disappear in a few days. Highly saccharine food failed to cause any return of the glycosuria. The amount also was slight, being only 0·63 per cent.

In connexion with this subject the following remarks of von Noorden are noteworthy: "According to the researches of Toralbo, van Ackeren, and Gerhardt, diabetics often excrete such an excess of phosphoric acid and lime salts over the quantity in the food ingested that they must come from one of the tissues of the body. This can only be from the bones. Gerhardt attributes this to the increased acidity; administration of alkalies diminishes the excretion of lime." Osteomalacia, in which a similar increase in the amount of lime and phosphoric acid excreted occurs, arising in unfavourable conditions of nutrition, &c., sometimes passes over into diabetes under more favourable surroundings (Lymann). Naunyn states that imperfect union may occur even though at the time sugar be not excreted; this he also attributes to hyperacidity. He also refers to the frequent painlessness of fractures in diabetic subjects. Thus, out of 12 cases of fracture in diabetic subjects three of the patients died, one after a primary amputation, one from coma induced by the shock of the accident, and one from pyopneumothorax the result of fractured ribs. In five cases union was delayed or was non-existent. In the remaining four union resulted in a normal manner. The number of cases is small, but when it is considered that the fact that union was not normal led to the publication of five of the cases and that of the other four three were taken from the casebooks of a large hospital (St. Bartholomew's) from the years 1884 to 1900, and that the result was quite good as regards union, considerable doubt must be thrown on the former statement that non-union was very common. But taking van Noorden's observations *re* the lime salts into account it would certainly be advisable to administer lime salts, preferably the carbonate, on account of the liability to the occurrence of acids in excess, to every diabetic who should be so unlucky as to sustain a fracture. (*Vide* Table IX.)

CLASS IV.

This class includes all those cases in which a septic element is already present at the time of observation. It includes, therefore, gangrene, abscesses, carbuncle, middle-ear disease, &c. A short reference will be made to gangrene and the subject of middle-ear disease will be more fully considered.

Gangrene.

Gangrene is, as has been stated already, rarely the direct result of diabetes, occurring only indirectly as the result of arterial sclerosis or nerve degeneration. The term "diabetic gangrene" is usually applied to gangrene of the lower extremities. A vast amount of literature has accumulated around the subject and the subject is further complicated by the fact that ordinary senile gangrene may be complicated by glycosuria. The best paper on the subject is that of Gussenbauer, with whom my own researches agree. He advocates diet and general treatment in the first place. The condition of the arteries should be carefully investigated on both sides. If the pulse be distinctly present in the anterior

TABLE IX.—FRACTURES IN DIABETICS.

No.	Sex and age.	Reference.	Injury.	Operation.	Result.	General treatment.	Remarks.
1	Male; 51 years.	St. Bartholomew's Hospital Surgical Register, 1899, No. 1492.	Fracture of seven ribs from wagon wheel.	—	Recovery without delay.	Adopted on the sixth day after the accident. Diet and codeine.	Much surgical emphysema. Urine: 5 per cent. of sugar; on discharge on the twenty-seventh day 3 per cent.
2	Male; 40 years.	Ibid., vol. iv., 1890.	Fracture of several ribs from a fall. Empyema. (The chest wall infiltrated.)	Excision of a portion of a rib on the eighth day.	Death on the sixteenth day.	Not mentioned.	Diabetic history. The amount of sugar not recorded. Much surgical emphysema.
3	Male; 58 years.	Ibid., vol. iii., 1891.	Sub-trochanteric fracture of the femur (right).	—	Recovery (left the hospital in from six to seven weeks).	,,	Urine: specific gravity 1038; much sugar. After three weeks the sugar had nearly disappeared.
4	Male; 55 years.	St. Bartholomew's Hospital, Matthew Ward book, 1890.	Pott's fracture.	—	Recovery. No delay.	—	A pronounced diabetic. Subsequently transferred to a medical ward.
5	Female; 60 years.	Legendre.	Fracture of the surgical neck of the humerus.	—	Recovery. Union complete in four weeks.	—	Intermittent diabetes. Much increase in excretion of urea.
6	Male; 35 years.	Verneuil (Bulletin de l'Académie de Médecine, 1889).	Compound fracture of the left femur.	—	Sloughing and ulceration. Union nearly complete in four months.	—	Diabetes for four years. From two to three litres of urine; much sugar. Delayed union (but the fracture was compound).
7	Male; 57 years.	,,	Fracture of the neck of the humerus.	—	Much callus. Three months later, on death occurring from an accident, pseudarthrosis was discovered.	Refused.	Diabetes for two years. 10 litres of urine; much sugar. Non-union.
8	Male; 54 years.	,,	Fracture of the radius and ulna.	—	Non-union; still present nine months later.	Adopted.	Reduction of the sugar present from 7·96 per cent. to nil. For four years symptoms of diabetes.
9	Male.	Berger.	Fracture of the lower third of the leg.	—	Union complete in 14 weeks.	,,	Diabetes for years. Sugar from 7·5 per cent. to 4·8 per cent.; reduced by treatment to 1·7 per cent.
10	—	Lésty (Smith and Durham).	Fracture of the leg.	—	United in five months.	—	Diabetes.
11	Male; 46 years.	Spitzer.	Fracture of the clavicle, June 29th, 1899.	—	Death on July 6th from coma.	Adopted.	The patient had been under medical treatment for four years for diabetes. The amount of sugar per diem rose from 18 grammes to 245 grammes (from 0·9 to 4·8 per cent.) and the amount of ammonia from 0·9 gramme to 2·1 grammes per diem in spite of sodium bicarbonate.

and posterior tibials and in the dorsalis pedis local removal of the diseased parts will suffice. If, however, the pulse be not perceptible there, but be well marked in the popliteal, amputation below the knee may be performed, provided that the gangrene has not spread beyond the dorsum of the foot and that the leg is free from phlebitis and lymphangitis. If, however, these conditions be not fulfilled or the popliteal pulse be not felt, then amputation must be performed through the thigh. If gangrene has spread beyond the dorsum of the foot, or if the urine contains acetone or aceto-acetic acid, or if stupor or hiccough is present, the prognosis is necessarily bad. He illustrates his paper with nine cases, of which the following two are the most instructive. A man, aged 56 years, who had suffered from diabetes for some years, became the subject of gangrene of the right foot, the dorsum and sole being affected. Lymphangitis was present above the internal malleolus. He was dieted. Gritti's amputation was performed with success. Two years later, general treatment having been in abeyance in the meantime, the left great toe became gangrenous. The dorsalis pedis distinctly pulsating a local amputation was performed, the patient recovering perfectly. In the other case, though the brachials were rigid and the posterior tibial pulse could not be felt, the dorsalis pedis and popliteal pulsated distinctly. Local removal was successful after dieting and local antiseptic measures. The urine contained 4·8 per cent. of sugar. As a local disinfectant he employed aluminium acetate. He does not refer to the state of the reflexes, though these should certainly be considered. It will also be observed that he does not limit himself to the simplest operations but employs such methods as Gritti's. During the years 1884–1899 the following were the numbers of cases treated at St. Bartholomew's Hospital: unoperated, 11 cases, all resulting fatally; and amputated, eight cases with six deaths. Of the latter in six cases an amputation below the knee was performed; one patient recovered after sloughing of the flaps, the wound not completely healing for many months. Among the fatal cases sloughing of the flaps occurred in four; in the fifth the patient died on the sixth day demented, the wound being united by primary union. In this case there was no tibial pulsation and the amputation was below the knee. In the remaining two an amputation through the thigh was performed. One recovered after slight suppuration during the course of which he became very restless and almost comatose. The other, a woman, aged 79 years, died, probably from sepsis as the wound did not run an aseptic course; the gangrene in this instance was moist. The arteries were healthy but the nerves were degenerate. If in doubt an amputation should be performed above the knee rather

than below. A few cases of gangrene of the upper extremities have been recorded. Grossman's paper based on some 224 cases of gangrene in diabetes I have been unable to consult save in a review. He also emphasises the importance of arterio-sclerosis and nerve changes. He further states that a slight amount of sugar in the tissues is favourable to the growth of pyogenic cocci and their symbiosis with other bacilli.

The following case of gangrene which was under the care of Mr. W. J. Walsham is of interest, as the amount of ammonia was estimated, and being excessive sodium bicarbonate was administered with success. The patient eventually died and though before death he was unconscious, yet death cannot be considered to have been due to diabetic coma as the temperature was raised and bacteriological examination of the blood showed streptococcus poisoning. Death was therefore due to sepsis.

The patient, a male, aged 67 years, was admitted on April 17th, 1901, with gangrene of the second toe on the left foot; this resulted from some damage earlier in the winter. On admission he was well nourished and his temperature was normal. There was sugar in the urine but the amount at the time was not estimated. The urine contained 1·5 grammes of ammonia in the 24 hours. He was then placed on sodium bicarbonate in 30-grain doses thrice daily which were increased later to 90-grain doses every four hours. This reduced the ammonia to 0·25 gramme. The sodium bicarbonate, however, made him vomit. He was at the same time dieted and was placed on codeine. After the above preliminary treatment the leg was amputated through the lower third by lateral flaps (the patient not consenting to an operation higher). The arteries were diseased; a microscopical section of the posterior tibial showed a channel thrombus. On the third day after a rigor gangrene was discovered to have spread to the flaps. (The original operation was performed on April 30th.) After dressing the temperature fell for a few days but it rose again, and as he got steadily worse a further amputation was performed through the lower third of the thigh by antero-posterior flaps, but owing to his general septic condition at the time he was not much improved and finally he became unconscious and died late on May 16th. (The second operation had been performed on the 14th.) His temperature just before death was 102° F., having been the day before from 103° to 104°.

Necropsy.—The arteries about the base of the brain were very atheromatous. The lungs were emphysematous and very œdematous. The heart was hypertrophied (18 ounces). The liver was slightly enlarged and there was an empyema of the gall-bladder; the gall-bladder was also adherent to the duodenum by recent lymph. The spleen was diffluent. The kidneys were enlarged (18 ounces). The pancreas was normal to the naked eye. The tissues of the stump were sloughing but there was no osteomyelitis of the femur. The femoral artery was rather atheromatous.

Bacteriological examination.—In the heart's blood there were streptococci, with contaminations. A subculture yielded pure streptococci.

Microscopical examination.—The pancreas showed no trace of degeneration; on the other hand, its cells seemed to be large and active. The kidneys, save for some round-celled infiltration and cloudy swelling such as would be accounted for by the temperature, were normal in appearance. The amount of urine varied between two pints and four and a half pints. The amount of sugar was between 0·4 and 1·64 per cent. The largest amount was on May 9th when 736 grains were excreted in the 24 hours. The temperature was normal on this day. The average total amount was about 300 grains. (Personally observed.)

Diabetes and Otitis Media.

Much has been written by foreign surgeons on the relation between otitis media and diabetes. Some consider that there is a special diabetic form in which mastoid symptoms predominate; some even consider that the mastoid is primarily affected. Kuhn, Raynaud, and Wolf are the chief exponents of this idea. Friedrich's views are similar; he considers the reason of the early, if not primary, mastoid disease to be the existence of arterio-sclerosis. Eulenstein has collected from the published papers a large number of cases which with his own amount to 50 in all; 45 of these were acute cases. Of these 50 cases 17 patients developed extensive mastoid disease, 11 developed slight mastoid disease, and 22 had no mastoid complications. Therefore, in 56 per cent. mastoid complications occurred. Of the acute cases the time of occurrence of the mastoiditis is mentioned in 12, in eight of which it occurred within a month of the onset of otitis media, in one case appearing as early as on the sixth day. Eulenstein states, however, that he has seen mastoiditis as precocious in non-diabetic cases. When it is remembered how in diabetics sepsis frequently runs riot it is not surprising that extensive suppuration and necrosis take place, since the mastoid process furnishes a good nidus for the organisms to develop. In many instances (Sheppard's case in particular) diabetes was not discovered until extensive cellulitis occurred in the neck, spreading down from the tip of the mastoid process and often reaching the clavicle. In the section on the influence of diet on the course of wounds a clinical history of such an occurrence was given where, on the discovery of 3·7 per cent. of sugar, rigid diet was adopted, the patient recovering completely. Sheppard's patient also recovered.

Pain is a prominent symptom and occurs early. In one of Friedrich's cases there was tenderness over the mastoid on third day of the attack in addition to severe pain over the side of the head.

The affection may be thus summed up. Otitis media is common in diabetics, infection spreading up from the pharynx which is often in a state of chronic catarrh. Its onset is sudden; the pain is of great intensity and persistence, even though there be free discharge through the external meatus; the discharge is often bloody; and there is a great tendency to mastoiditis and necrosis (Eulenstein). In many instances extensive cellulitis of the neck succeeds operation, but in others the disease has run quite a normal course. All are agreed that if an operation be required it should be performed in spite of the presence of sugar, general treatment being also adopted. Particular attention should be paid to Gerhardt's reaction and to the amount of ammonia excreted. Thus Lannois operated on a man whose urine measured three litres per diem with a percentage of sugar of 9·8, but the amount of ammonia was low. He recovered from the operation in spite of gangrene of the skin (he died suddenly two months later, the mastoid having quite recovered). In the case of a man, aged 42 years, a drinker, whose urine contained 5 per cent. of sugar and albumin, Friedrich merely opened an abscess over the mastoid under the ether spray, the abscess healing completely. He thinks that if the percentage of sugar be high and uninfluenced by diet, or if the heart, the lungs, or the kidneys be unsound, the prognosis is bad and a simple operation under a local anæsthetic should be performed.

Other Septic Affections.

Spencer records an interesting case of cellulitis starting in the bursa olecrani for which he performed an amputation, the patient recovering, although the operation was performed through indurated tissues and although at the time of the operation he was in a semi-comatose condition. The following case recorded by Naunyn is of interest from the fact that it bears out the observations of Nicolas that glucose favours the pyogenic properties of many organisms whilst it diminishes their virulence. A man, aged 62 years, came under observation, after undergoing several rigors, with a large abscess in the left thoracic region. Although at the time of the rigor the right half of his prostate was enlarged it was scarcely painful. The urine contained 11 per cent. of sugar but no other abnormal substances were found in it. A large abscess formed in the prostate and spread up behind the symphysis pubis; the thoracic abscess also spread widely; nevertheless, both healed up completely after incision. Thus very extensive suppuration is not necessarily fatal in diabetes. Other septic affections, such as carbuncle, will not be considered.

GENERAL CONCLUSIONS.

These conclusions are based on the cases in Group III. and all the doubtful cases of temporary glycosuria, such as one of Tuffier's tongue cases and Giles's fibroid case, have been omitted. It will be seen on examination of the tables that most of the principal major operations of surgery have been performed with a large amount of success. In all 92 operations have been performed on 83 patients, of whom 23 died, giving a percentage of patients recovering of 72·28 and of successful operations a percentage of 75. This at first seems to indicate a high mortality, but when it is considered that in three cases death seemed to be inevitable within a few days if an operation was not performed the mortality is not unduly high. (These three cases include two strangulated herniæ, in one of which coma was already appearing and

in the other gangrene of the gut was present, and an inguinal colotomy for complete obstruction, an operation at all times extremely grave when obstruction is present.) Further, in 11 cases the operation was performed for malignant disease, and since the latter is more likely to be fatal within a shorter period than diabetes in an elderly subject much must be risked to gain much. The same cannot be said of the parotid tumours, as their nature is not indicated, but one was undertaken on an at that time unknown diabetic and was a very difficult operation. The dermoid tumour of the ovary was a very difficult operation owing to the extensive adhesions. The patient who underwent Kraske's excision of the rectum also had unsound kidneys and probably died from uræmic coma induced by the use of much opium. The excision of a popliteal aneurysm was also on an unsuspected diabetic.

The operations of expediency were singularly successful. These include five radical cures of hernia, six plastic operations on the female generative organs, and one operation for piles. A case of vaginal hysterectomy for procidentia, however, was fatal. The actual cause of death was coma in 11 cases and sepsis in seven; of the others pneumonia and shock figure, whilst in three the cause is doubtful. (Coma and sepsis will be considered separately later.) Of these 83 patients 35 were males, of whom 24 recovered, and 42 were females, of whom 32 recovered, the percentage being of males 68·5 and of females 76·1; of the remaining six of unstated sex five recovered. This predominance of females is probably due to the fact that the disease was not so acute. Of 49 patients over the age of 45 years 19 died, whilst of nine under that age only one died. Two contrary factors are at work here, one being the more chronic nature of diabetes in advanced life but accompanied by the great probability of arterial and nerve-degeneration. The details are too meagre to draw accurate conclusions of the influence of nerve-degeneration on healing, the only ones available being Reynier's. He has drawn up some tables of cases with and cases without knee-jerks, of which, however, the only comparable cases are the septic ones. Of these, of 13 septic cases in which they were absent all died, whilst of 13 in which they were present only two died. But the cases in the first group seem to have been more severe.

As to the condition of the urine, the percentage of sugar is no criterion as fatal results have followed from coma when no sugar had been present there for some time previously. The highest percentage in fatal cases was eight and in non-fatal cases was 11·5. A more instructive figure might be obtained if the total sugar excreted per diem were considered, but as this is in so many recorded cases impossible to ascertain it will not be further considered. Albuminuria is a serious complication; the three patients in whom it was present all died. The presence of abnormal substances, such as acetone or aceto-acetic and oxybutyric acids, and with them an increase in the amount of ammonia excreted, is of the utmost significance, and if irreducible of unfavourable prognosis. This will be considered in detail in the section on coma. In none of the cases in Group III., save in a fracture case, was the amount of ammonia excreted stated, and here its persistance indicated an unfavourable prognosis which was fully borne out by the fatal termination. In one or two of the otitic cases it has been recorded, and in the case of gangrene under Mr. Walsham's care an increase in the amount was discovered, but this responded to treatment, the patient, however, ultimately dying, but not from coma. Alcoholism is considered by Verneuil to exert an unfavourable influence. In many of the cases the patients were full-bodied, constituting the condition called "diabète gras." Many of the older writers consider that diabetes exerts a baneful influence on the healing of wounds, but this apart from sepsis does not necessarily follow; it must be remembered, however, that a wound may slough or suppurate without any pain or even much rise of temperature. This euphoria is rather a noticeable feature in such cases (*vide* the amputation of the hand and the vaginal extirpation of the uterus). But of wounds of the anterior abdominal wall, as for operations for radical cure of umbilical herniæ, ovariotomies, &c., out of 15 in seven union was not good, disunion even occurring in three, no union in one, and in three its progress was described as being slow. Preliminary treatment was adopted in 34 cases, in six of which the patients died, two from sepsis and two from coma. In 11 cases there was no preliminary treatment. Of these four patients died, two from sepsis and two from coma. The percentage of recoveries of the dieted is therefore 82·3 and of the undieted 63·63. Though the number of non-dieted cases is small yet the difference in result is 18·66 per cent. Of those in whom the preliminary treatment was doubtful 13 out of 39 died, yielding a percentage of recovery of 66·66. In none was the sodium carbonate treatment adopted. The effect of diet on pre-existing sepsis is strikingly shown in the following case reported by Davidsohn.

A man, aged 49 years, was admitted in July, 1894, suffering from suppurative otitis media. This dated from a chill on May 6th, discharge appearing on the 9th. No fresh symptoms were noted until pain appeared behind the ear on July 3rd, followed by a rigor on the 6th. On the 9th there was obvious mastoid suppuration. The mastoid was explored on the same day by Schwabach. The bone was diseased and was scraped and the wound was packed with gauze. The progress of the wound was favourable until the 26th, when brawniness due to cellulitis of the neck occurred. This had spread down to the clavicle by the 30th in spite of free incisions. Counter-incisions were freely made under an anæsthetic. Slight improvement resulted, but two days later the discharge was very offensive and contained sloughs. A history of diabetes reaching back to February was now elicited, the urine containing 3·7 per cent. of sugar. Under rigid diet in eight days the percentage fell to 1 and in nine days it disappeared, the wound at the same time healing rapidly, so that by the end of August it was completely healed. The perforation in the membrane healed and the patient gained weight.

Many other similar cases might be cited (*vide* Table III. on operations on the breast).

Diabetes and Sepsis.

Some foreign surgeons have emphatically stated that if after an operation the wound for no apparent cause becomes septic or sloughs the urine should be examined for sugar. This sometimes will be found present although absent immediately before, since in some cases diabetes is latent, sugar reappearing after the disturbance of functions caused by the anæsthetic or by the mental effects of the operation. This is comparable with the well-known increase in the amount of the sugar excreted, which often occurs under such circumstances. Kraske, Fischer, Bujwid, Müller, von Noorden, and others have demonstrated the presence of staphylococcus aureus, staphylococcus albus, and other suppurative micro-organisms in the septic processes that occur. Occasionally moulds have been found associated with the abscess formation in diabetes (Auché and Dantec). Bujwid performed a series of experiments and showed; (1) that sugar was not produced by the growth of staphylococcus aureus; (2) that its growth in a culture containing sugar was less luxuriant than in a sugarless though otherwise similar medium, and further that its growth was colourless; (3) that that amount of staphylococci which when suspended in an indifferent though sugarless fluid did not produce suppuration when suspended in a similar though sugar-containing fluid did produce it; (4) that if the injection of a subminimal amount of staphylococci into an animal were followed by the injection of normal saline fluid no suppuration ensued, whereas the injection of a sterile solution of sugar was attended by suppuration; and (5) that if the sugar solution were withheld until the staphylococci disappeared from the blood no suppuration resulted. In one animal gangrene of the skin ensued on the introduction of a sugar-containing fluid.

These experiments have been repeated by Nicholas and Karlinski with similar results. Nicholas showed, however, that the actual sequelæ differed slightly with the seat of injection, a subminimal dose of staphylococci producing a slightly different result according as to whether it was injected into the blood-stream or into the cellular tissue. Further, such a dose of cocci followed by sterilised water produced suppuration almost as readily as did a solution of sugar, showing that it was not so much the sugar as the damage to the tissues produced by it. In addition, a dose of staphylococci sufficient to kill an animal in a few days, if followed by a solution of sugar, either did not kill it at all or only after a much longer period, and that a large abscess made its appearance instead of a small one or septicæmia. Fe:.ero has established similar facts for staphylococcus albus. Thus sugar diminishes the virulence of micro-organisms but increases their pus-producing properties.

In addition to the lowered vitality produced by the circulation of an abnormal amount of sugar the presence of arterio-sclerosis and nerve degeneration must be taken into account, for the diabetics that usually seek surgical aid are middle-aged or at least suffering from a chronic form of the disease; for many are stout full-blooded individuals (*diabète gras*). With reference to nerve degeneration, it is well known that after severance of a nerve there is a greater tendency to trophic lesions. Herman and Kasparek have performed a series of experiments with the pyogenic organisms and have shown that after the division of the sciatic nerve on injection of the organisms suppuration was liable to follow on the injured side in the marrow and joints. Thus there is abundant reason for the occurrence of suppuration in diabetics. The sugar directly lowers the vitality of the tissues and by inducing chronic vascular and nerve changes also adversely affects the body. It must be remembered in this connexion that sepsis sometimes produces temporary glycosuria, but even here there is a difficulty, for the patient may be suffering from intermittent diabetes, and the shock of the operation may cause it to reappear.

Coma.

It is well known that in diabetic subjects the most trivial incident or accident may be followed by coma, whilst, on the contrary, at times even the most severe injury may be sustained without any untoward result. It is therefore advisable to study in detail the pathology of diabetic coma. In diabetic coma the urine contains one or more abnormal substances the principal of which are acetone, and aceto-acetic and oxybutyric acids. Dreschfeld has shown that considerable amounts of acetone and aceto-acetic acid can be administered to man or animals by mouth without any bad consequences and that little of them can be recovered from the urine. Moreover, acetone can be subcutaneously injected without danger provided that the amount be small and that elimination be not hindered, but if these conditions be not observed the animal passes into a state closely resembling diabetic coma. These bodies have also been found in the urine of patients who have died comatose after such diseases as malignant disease of the liver. These bodies also cause albuminuria—a condition alleged by Stokvis to be an accompaniment of diabetic coma. Huchard, Kirstein, Coranda, Hallevorden, and others consider that coma is due to acid poisoning. Stadelmann and Minkowski have discovered an acid in the urine of certain diabetics identical in composition with oxybutyric acid but lævo-rotatory, the artificial acid being optically inactive; this they therefore call "oxybutyric acid." The actual mode of operation of these acids seems to be that they become neutralised by the sodium carbonate present in the blood and that if they are present in excess there is considerable risk that the alkalinity of the blood may be so reduced that it is unable to carry on its functions in an efficient manner. That this is so in animals is proved by the fact that if sodium carbonate be injected acid poisoning does not occur. Minkowski found in a comatose patient only 19·5 volumes per cent. of carbonic acid instead of the normal 35 volumes. This fact shows that its alkalinity was reduced. Diabetic blood is still, however, toxic, though to a less degree, after its alkalinity has been restored.

There seems, however, to be a safety-valve arrangement, for with an increase of indestructible acids in the urine there is a concomitant increase in the amount of ammonia excreted; this may be as much as from four to six grammes, or even more, per diem instead of the normal 0·7 to 0·9 gramme. In febrile conditions it also rises. Therefore, by destruction of the proteids a certain amount of ammonia instead of urea is set free whereby the fixed alkalies of the blood are protected. Naunyn sums up the matter thus. In severe diabetes, especially in young patients, the acids are excreted combined with fixed alkalies; if the acidosis be excessive they are also excreted in combination with ammonia obtained by the destruction of proteid (ammonia taking the place, in part, of urea, the amount of ammonia excreted being an index to the danger of death from coma). If more than three grammes of ammonia be excreted per diem there is great risk of coma and if it exceeds four grammes, in his experience, coma is inevitable sooner or later. Becker has brought forward the hypothesis that coma, as a post-operative complication, is frequently induced by the anæsthetic. He found that acetone, as indicated by the nitro-prusside test, was present in 125 out of 188 patients after the administration of a general anæsthetic (66 per cent.). Abram repeated these observations and found it in 16 out of 25 (64 per cent.), and that on distillation it could be detected in all. It remained in the urine for from five to eight days, but there was no relation between its duration and the length of the anæsthesia. After ether Becker found it in 67 per cent. out of 148 cases. After chloroform Abram found it in 75 per cent. (the number of cases was, however, small). In six instances Becker found aceto-acetic acid as well. Kast and Master have found that prolonged chloroform narcosis causes increased proteid destruction with an increase in the amount of acids excreted. These facts indicate that a general anæsthetic is attended, in a diabetic subject, with a risk of the supervention of coma. It must be remembered that every case of coma in a diabetic is not necessarily of diabetic origin; in some it may be the unconsciousness of septic poisoning, in others, as in the fatal excision of the rectum, it may be possibly of uræmic origin. In the cases in Group III. the youngest save one, who was described as "a young woman," was 47 years of age: all the rest were over 50 years, but the majority of diabetics who undergo surgical operations are middle-aged. Coma the result of an anæsthetic usually appears within the first 48 hours. Occasionally the anæsthesia passes direct into it. After a hysterectomy by Landau, a suprapubic cystotomy, and a catheterisation under chloroform the patient in each case died from coma, in all probability the result of the anæsthetic.

Indications against Operation and Rules for the Conduct of Operations.

A thorough examination of the urine must be made in all cases. Not only the amount of sugar is to be ascertained but the presence or absence of acetone or acid bodies; the ferric chloride reaction and Legal's test are to be employed in every instance. The presence of oxybutyric acid is not easy to demonstrate or to estimate save by the polarimeter. The total amount of ammonia must always be estimated. 1. No operation save of the extremest urgency is to be performed if there is over one gramme of ammonia excreted in the 24 hours until this has been reduced to the normal amount. 2. An operation should be postponed if there be aceto-acetic acid in the urine, though the ammonia be not markedly increased. 3. Much albumin in the urine is a bar to operation. 4. If serious disease of other organs such as the liver be present an operation should be avoided. 5. Rapid wasting in a stout diabetic not obviously dependent on the surgical lesion demanding treatment should be a reason for postponing an operation until the general condition be improved. An operation should be performed: (1) for malignant disease, if apart from diabetes such would be urged; (2) in the case of large abdominal tumours, especially in females; (3) in diabetics in good health without extensive arterial or nerve-degeneration cosmetic operations may be performed, especially in females; and (4) an emergency operation is to be undertaken even in the most unfavourable circumstances, but a very guarded prognosis is to be given. Save in the last category, if any of the indications against operation be present the operation should be postponed until they are ameliorated.

Preliminary treatment and method of operation.—In all cases in which delay does not mean loss to the patient a careful diet is to be adopted; further drug treatment, such as codeine or morphia, may be adopted. If ammonia be present in excess sodium bicarbonate is to be administered daily until the percentage becomes normal; the actual amount required may be as much as from 30 to 40 grammes per diem. Should it make the patient vomit it may be given per rectum. By this preliminary treatment the risk of sepsis and coma is lessened. Such operations as can be conveniently carried out under a local anæsthetic should be performed by its aid. Laisney operated on 102 cases of cataract, with 99 successes (Legendre), and Glasscott operated on 30 cataracts under cocaine without mishap (Dreschfeld). If a general anæsthetic be employed ether may possibly be safer than chloroform, but in any case sodium carbonate is to be administered for a few days before and after. If the increased vulnerability of the tissues be considered an aseptic rather than an antiseptic operation is the ideal undertaking. All strong antiseptics are to be kept from the wound. Further, the patient is not to be considered cured until the wound is completely healed. Hæmorrhage under modern methods of operation is not to be feared. In operations upon the urogenital organs where asepsis is difficult to maintain an internal antiseptic such as urotropine should be administered.

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SOME NOTES FROM AN INQUIRY INTO THE ACTION OF DINITRO-BENZENE UPON THE URINE OF MAN,

AND EXPERIMENTS PROVING THE INNOCUOUSNESS OF DINITRO-TOLUENE UPON ANIMALS.

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IN this inquiry we find that a dose which is immediately fatal or fatal within 24 hours does not exhibit its presence in the urine of man or animals. On the other hand, animals fed upon continuous doses—that is, doses which cause serious and dangerous symptoms or death in a few days—show well-marked pathological features in their urine. These consist of tube casts, brown flakes, and hæmoglobinuria. This latter point has been well worked out by Strassmann and Stecker. In our experiments the dinitrobenzene was administered either hypodermically, or by inunction through the skin to cats. None of the urine of cats so killed showed any perceptible change of colour and in only one which had died from slow chronic poisoning did we find an indication of free dinitro-benzene.

In no fatal case of poisoning amongst the workmen have we

ever discovered any evidence of blood corpuscles or hæmoglobin in the urine. In chronic and subacute cases the typical dark tawny colour of urine is always well marked, which is probably due to some pigmentary derivatives, not to free hæmoglobin. No doubt large and long-continued doses given by the mouth to men would produce, as in animals, hæmolysis, broken-up blood-clot in the intestines, and the exudation of blood into the tubules of the kidneys. But we find that neither in the inhalation of dinitro-benzene vapour, its absorption through the skin, nor when given hypodermically to man or animals, are the grosser lesions observed, even in fatal cases. This fact strengthens us in the belief that it is chiefly through absorption by the skin that cases of poisoning occur during the industrial manipulation of this substance.

We have tabulated below the results of the analysis of the urine of men who were constantly working with dinitro-benzene. Each case was of an exceedingly mild character. The frequent presence of urobilin has not been recorded previously and points to the powerful hæmolytic action of this poison even when absorbed in very minute doses.

slight indication was found. This was in the case of a man who showed indications of poisoning and who had to leave off working.

A second question which has claimed our attention, and also a large proportion of the chemical trade interested in the practical manipulation of the toluene and benzene group of the nitrated aromatic series, is the comparative danger of these two groups. Commercially it is found that some of the toluene group can be substituted for the benzene in the manufacture of certain explosives. The employment of the benzene group is surrounded by a number of technical precautions. It is largely and widely becoming the custom where possible to substitute those of the series which are less harmful for those which experience has shown to be the more dangerous.

In an article in THE LANCET of August 31st, 1901, p. 582, a statement was made by one of us that dinitro-toluene is considered highly deleterious and is dreaded by the workmen who are engaged in its production. This settled belief has been repeated to us and it appears to express the general consensus of the opinion of the employés and

A TABLE SHOWING THE RESULTS OF THE ANALYSIS OF THE URINE OF MEN WHO WERE CONSTANTLY WORKING WITH DINITRO-BENZENE.

No.	Specific gravity water = 1000.	Appearance.	Colour.	Reaction to litmus.	Urea per cent.	Albumin.	Bile pigments.	Sugar.	Urobilin.	Dinitro-benzol.
1	1039	Clear.	Red-brown.	Acid.	2·6	*Nil.*	*Nil.*	*Nil.*	*Nil.*	*Nil.*
2	1030	,,	Yellow.	,,	—	—	—	Present.	—	,,
3	1024	Slight precipitate mucus.	,,	,,	—	*Nil.*	*Nil.*	*Nil.*	*Nil.*	,,
4	1021	,, ,,	Red-brown.	,,	—	,,	,,	,,	,,	,,
5	1025	Heavy red precipitate.	,, ,,	,,	—	,,	,,	,,	Present.	Trace.
6	1027	Clear.	,, ,,	,,	3·3	,,	,,	,,	*Nil.*	Faint trace.
7	1036	Thick white precipitate.	Pale yellow.	,,	2·9	,,	,,	,,	,,	,, ,,
8	1036	Red deposit.	Red-brown.	,,	3·1	,,	,,	,,	Present.	*Nil.*
9	1022	,, ,,	,, ,,	,,	3·0	,,	,,	,,	,,	,,
10	1022	Clear.	Yellow.	,,	2·8	,,	,,	,,	*Nil.*	,,
11	1027	Red deposit.	Red-brown.	,,	3·1	Trace.	Trace.	,,	Present.	,,
12	1025	,, ,,	,, ,,	,,	2·9	*Nil.*	*Nil.*	,,	,,	,,
13	1024	,, ,,	,, ,,	,,	2·8	,,	,,	,,	,,	,,

It will be noticed in the above table that all the samples are acid, many being strongly so. Nearly all are dark-brown in colour and generally precipitate out a red deposit, principally urates. In most of these urobilin is present and can be easily recognised by the following test. 100 cubic centimetres of the urine are acidified with 10 drops of strong hydrochloric acid and are then shaken with 20 cubic centimetres of chloroform. The chloroform which falls to the bottom is separated by means of a separating funnel and filtered into a test-tube. Four cubic centimetres of a solution of one gramme of crystallised acetate of zinc dissolved in a litre of 95 per cent. alcohol is then poured gently down the side of the test-tube and at the junction where the liquids meet a green fluorescent ring characteristic of urobilin will appear, and on shaking the solution will become fluorescent, being green by transmitted light and rose-coloured by reflected light. This pigment can also be detected by means of the spectroscope.

No experimental evidence has yet proved that reduction takes place in the body in case of the nitro compounds of benzene to aniline or phenylene-diamine. In several samples of urine tested both nitrates and nitrites were present, so that in the case of phenylene-diamine being present the pigment Bismarck brown would be formed and would give the urine a brown tint. The samples of urine were tested for free dinitro-benzene by the following method. The urine is treated with zinc and hydrochloric acid for some hours. Any dinitro-benzene that may be present is reduced by the nascent hydrogen into phenylene-diamine. The urine is then alkalised with caustic soda and well shaken up with ether. The ether is then separated, filtered, and evaporated. The residue is treated with diluted acetic acid and nitrite of soda, when a yellow or brown colouration shows the presence of dinitro-benzol in the original sample. In three cases a

officials at certain works. Dr. T. M. Legge, H.M. medical inspector of factories, from his large experience of such industries, thought there might be some doubt on this point. We therefore deemed it advisable to experiment upon animals, with the following results. To two cats were administered a 1 per cent. solution of dinitro-toluene in cod-liver oil. The quantity given was two cubic centimetres in the morning and two cubic centimetres in the evening daily until each had partaken of 24 cubic centimetres. Neither cat exhibited any symptoms of poisoning. Two weeks later one of the above cats and a second fresh cat were each dosed with a 1 per cent. solution of dinitro-toluene in cod-liver oil, four cubic centimetres in the morning and four cubic centimetres in the evening until each cat had received 24 cubic centimetres, with no result except a very slight change in the colour of the mucous membrane.

These experiments prove that to cats dinitro-toluene is rather a harmless drug and if we compare it with the results published in the article in THE LANCET already alluded to where similar doses of dinitro-benzene were administered to cats the contrast is most marked. It must be remembered that these experiments deal with animals, but our experience with allied groups of the aromatic series show a close similarity of action when they are exhibited to animals and men and further industrial experience strengthens our belief that mono- di- and tri-nitro-toluene can be safely manipulated with ordinary precautions.

NOTIFICATION OF CHICKEN-POX.—At the meeting of the Falmouth Corporation held on May 8th it was decided, on the recommendation of the Sanitary Committee, to make chicken-pox a notifiable disease for six months.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF RODENT ULCER OF THE NOSE AND EYELIDS TREATED WITH THE X RAYS.

BY G. G. STOPFORD TAYLOR, M.D. DURH.,
HONORARY PHYSICIAN TO THE LIVERPOOL SKIN HOSPITAL.

DURING the last 18 months I have treated a number of inoperable cases of rodent ulcer by the x rays with varying success. Some of them have equalled the following case but none have excelled it.

The patient in question was introduced to me by Dr. E. Adam. He was 82 years of age and had been employed in the mercantile marine. His previous history was as follows. For 20 years or more he had suffered from a small chronic ulcer on the right side of his nose which caused him much pain. He was treated with the usual remedies but without any benefit. Six years ago Dr. Adam brought him to me and I applied potassa fusa but failed to effect a cure. I have no record of the exact appearance of the ulcer at that time but when Dr. Adam brought him again in May, 1901, the disease presented the typical rolled edges of a rodent ulcer. It had much increased in size, extended to the inner angle of the orbit, and had destroyed portions of the lids together with the lacrymal canals and caruncle. The patient was in much pain.

Treatment was begun on May 15th. A current of three ampères was used for 20 minutes twice weekly. From June 12th the sittings were increased to four times a week. Up to about August 19th healing had been very slow, but on this date treatment had to be suspended because of the sharp reaction, indicated by a sudden appearance of a dusky red erythema surrounding the ulcer, attended by the destruction of the newly-formed epithelium upon its surface and of the surrounding epidermis, brought about, I think, by change of the x-ray tubes from one of high vacuum to one of medium vacuum. It took five weeks for the effects of this reaction to disappear, when spontaneous healing began and was very rapid, for on Oct. 15th the ulcer had cicatrised with the exception of a small area which proved obstinate and where, I believe, I had made the application of potassa fusa six years previously. On this date treatment by the x rays was resumed, but they were applied to this unhealed spot only for 10 minutes three times weekly, the newly-formed scar-tissue being specially protected from their action with double lead-foil shields.

Treatment was completed by Dec. 20th. At that time there was not the slightest evidence of the disease, neither has there been any recurrence. It is interesting to note also that the conjunctiva of the everted lower lid and that of the inner canthus was covered with a smooth layer of opaque horny epithelium and no trace of the puncta remained.

The patient was shown at the Liverpool Medical Institution on March 13th.

Liverpool.

A CASE OF MALFORMED FŒTUS.

BY NICOLAS ELRINGTON, L.R.C.P. LOND., M.R.C.S. ENG.

A PATIENT under my care, a labourer's wife, gave birth recently to a curiously malformed child. The body was well developed and the lower part of the face was that of an ordinary full-time child. The frontal bones were widely separated and were flattened back so as to be almost at right angles to the face. The eyes were very far apart and the eyeballs protruded. The parietal bones were small and what should have been their upper margins were pointing almost directly backward. The occipital bone was only represented by two small strips of bone lying close to the posterior edges of the parietal bones. All the cervical and the upper five or six dorsal vertebræ were apparently wanting. The chin rested on the second piece of the sternum; the ears, which were abnormally large, lay in front of the shoulders. The back of the head and the neck was occupied by a mass of freshly formed blood-clot which in one place had burst through the skin; there was no hair and the skin of the head was very thin.

The labour occurred at full term and the mother was certain that the child was alive two hours before her pains began which they did only three hours before the child was born. I had to be content with an external examination and consequently I cannot say what was the condition of the brain and the spinal cord. There was nothing during the pregnancy out of the ordinary except the amount of liquor amnii which was very excessive. I think that there is no doubt that the child died from the effect of pressure during parturition. The presentation, as may be imagined, was somewhat bewildering but the progress of the labour was very rapid and the child was born with the chin presenting under the symphysis pubis without any difficulty.

Wethersfield, Essex.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

LONDON TEMPERANCE HOSPITAL.

A CASE OF SOLID OVARIAN TUMOUR; LAPAROTOMY; ENUCLEATION; RECOVERY.

(Under the care of Dr. W. J. COLLINS.)

SOLID tumours of the ovary are much less frequently met with than are those which are cystic. The exact proportion is doubtful, but Bland-Sutton's estimate of 5 per cent.[1] is probably fairly correct. The malignancy of the ovarian tumours which are called sarcomata from the histological appearances varies within very wide limits; in some removal of the tumour is not followed by any recurrence even after several years, while in others early and extensive recurrence occurs, and yet no obvious histological difference may have been noticed in the growths. A very guarded prognosis must always be given.

A woman, aged 26 years, was admitted into the medical wards of the London Temperance Hospital on May 5th, 1901. She had been married for three years, she had one child two years old, and menstruation had been regular up to April, 1901. On May 4th she was suddenly seized with severe abdominal pain and was sick and faint. There had been no period from April 10th up to the time of admission. On admission the abdominal pain continued; there were tenderness and resistance in the lower abdomen, more on the left side than on the right. The general condition was good and her appearance was healthy. The temperature in the evening was 102·8° F. On the 5th it was noted that the cervix uteri was soft and patulous and that the pelvis was occupied by a nodular mass. Five days later bimanual examination revealed a tumour reaching as high as the umbilicus, where a sharp edge could be detected, and extending with less definition into the left lateral fornix; the tumour was moveable and appeared to be distinct from the uterus. On the 21st the abdominal swelling was found to be enlarging and it gave rise to considerable discomfort. Moreover, curious nodules and pedunculated parts were detected which raised a suspicion of extra-uterine pregnancy. On June 7th there was what appeared to be a normal catamenial discharge. Dr. Collins was asked to take over the case and on the 21st, under chloroform, he performed median laparatomy, exposing a solid tumour which appeared to spring from the right ovary. The growth seemed to be sessile, springing from a broad base, but with a little difficulty and care the whole tumour was cleanly enucleated. There was very little hæmorrhage. The left ovary contained a small recent corpus luteum but was otherwise healthy.

[1] Tumours, second edition, p. 123.

The tumour weighed three pounds six ounces and microscopically was a spindle-celled sarcoma. The peritoneum, muscles, and skin were separately sutured with silk; no drainage was employed. The healing of the wound was uninterrupted, with the exception of a small stitch abscess at the inferior extremity of the incision, but the temperature rose to 102° and continued high during three or four weeks owing to some pleurisy on the left side and on July 14th a small collection of sero-purulent fluid was incised and drained from the left pleura. The patient was discharged quite well on August 25th and recent reports from her have been entirely satisfactory.

Remarks by Dr. COLLINS.—The history and some of the symptoms on admission in this patient naturally raised *primâ facie* the question of "hæmatocele" or rupture of an early extra-uterine fœtation. The subsequent bimanual examinations, when more defined portions of the tumour were detected, led some who saw her to think that they could recognise definite fœtal parts; moreover, some lactiform fluid was derived from the nipples. Although one catamenial period had been missed there had been no irregular metrorrhagia and on June 7th a normal period commenced. Nevertheless the case was not free from doubt and as the patient's discomfort was increasing it seemed at least prudent to explore the abdomen. The tumour was of a reddish colour, more like a fibroid than an ovarian cystoma, and exhibited irregular and fantastic extensions of varying density both across the pouch of Douglas and towards the abdomen. The ease with which the mass was enucleated was surprising considering the appearance it gave, at first sight, of an unpromisingly broad pedicle.

NORTHAMPTON GENERAL INFIRMARY.

A CASE OF LOCALISED DISEASE IN THE OPTIC THALAMUS; SOFTENING AND HÆMORRHAGE; DEATH; NECROPSY.

(Under the care of Dr. FRANK BUSZARD.)

IN the present state of our knowledge of the functions of the basal ganglia the value of carefully described cases of lesions affecting these structures cannot well be overrated. In the following case the symptoms were very striking, and the post-mortem account is very clear, though no mention is made of the presence or absence of a clot in the veins of Galen. Dr. E. W. Goodall has related in the Transactions of the Clinical Society of London,[1] a case in which softening of both optic thalami occurred, with thrombosis of the veins of Galen. In that case, as in the one recorded below, there was hyperpyrexia just before death.

The patient was a woman, a multipara, 53 years of age. About a year previously to the onset of the present illness she was said to have had a "stroke" which affected her left arm chiefly, but from which she in three or four weeks completely recovered; with the exception of this she had always enjoyed good health. On the night of August 24th, 1901, she went to bed apparently well. On the following morning her husband stated that he could not get her to answer questions; she appeared to be very dazed and her face was drawn. She was admitted to the Northampton General Infirmary on August 30th. During the interval of one week which had elapsed between the date of the onset of the symptoms and her admission she appeared to have been in a very drowsy state; there was no vomiting during that time, or, indeed, throughout the whole illness. On admission the patient, who was somewhat wasted and looked much older than her years, appeared to be very drowsy and could only be roused with difficulty. She lay for the most part on her left side and answered questions but only in a very slow manner. She recognised objects to which her attention was drawn and named them correctly. The speech was blurred and indistinct and articulation was difficult, syllables being slurred together as in general paralysis of the insane. There were continuous "champing" movements of the jaws. The jaws and tongue were in constant movement as in the acts of mastication and deglutition, and these movements continued without cessation for 10 days, except during sleep. There was no difficulty in swallowing; slight left facial weakness was present. The pupillary reflexes were normal, there being no strabismus, nystagmus, or fundus change. Owing to the mental condition of the patient it was not possible to obtain any definite information with reference to alteration in the fields of vision. Neither the arms nor the legs showed any signs of paralysis. The arms, like the jaws, were never at rest but were the seat of constant athetoid movements which were unusually irregular and at times rhythmic. Tremor of the arms and hands was only present on voluntary movements. They were markedly ataxic and on the patient being told to do anything—e.g., to touch the nose with the index finger of the right hand—the act, which she did with difficulty, would be repeated time after time until she was told to stop, or on other occasions the finger and hand were kept in the new position and were not removed for some time. There was no paralysis or abnormal movement of the lower limbs. She was unable to stand without support, being unsteady and swaying about a great deal. Sensation was normal. The knee-jerks were brisk; there was no ankle clonus; the plantar reflexes were normal. The urine and fæces were passed into the bed. The pulse-rate ranged from 70 to 80, the respirations were 20, and the temperature was 99° F. The urine was normal; the tongue was furred.

From August 30th to Sept. 5th the condition of the patient remained the same. The movements of the jaws and arms never ceased except during sleep, the mental condition perhaps slightly improving. Pyrexia was present to a small extent, the evening temperature ranging from 99° to 100°. On Sept. 5th conjugate deviation of the eyes to the right was first noticed and this persisted until the day of death. From the time she first came under observation there was a tendency for the eyes to wander to the right and she kept them in this position for the most part, although moving them when her attention was directed. She became more apathetic and on the 10th she relapsed into a state of coma. The movements of the jaws and arms ceased and she lay on her left side with the eyes open and turned to the right until the 12th when the temperature ran up to 105·9° at 6 P.M. and she died at 11 P.M.

Necropsy.—A post-mortem examination was made 12 hours after death. With the exception of a little hypertrophy of the left ventricle of the heart and extensive atheromatous changes in the aorta, the thoracic and abdominal organs were normal. On removing the skull-cap the membranes were found to be normal; there was no meningitis or bulging or flattening of either cerebral hemisphere. The vessels at the base of the brain, and particularly the middle cerebral arteries, were in an advanced stage of atheromatous and calcareous degeneration. No clotting in the right middle cerebral artery was observed. On making horizontal sections into the brain and laying bare the basal ganglia the right optic thalamus was seen to be swollen and distended, bulging more than the left optic thalamus into the third ventricle. The left optic thalamus was atrophied; on section it was brownish in colour and firmer than normal. On cutting into the right optic thalamus its interior was found to be occupied by a blood-clot, which, however, was strictly confined to the thalamus and did not in any way involve the internal capsule or corpus striatum. The substance of the thalamus surrounding the clot was in a condition of red softening. It was thought probable that a thrombosis had occurred at the date of onset and had caused softening to occur in the optic thalamus and that a hæmorrhage had secondarily occurred on Sept. 10th, the day on which the coma developed. No blood or excess of fluid was discovered in the ventricles.

Remarks by Dr. BUSZARD and Dr. W. BERTRAM WATSON.—Among the various physiological problems which the neurologist has to face there are perhaps none more complex than those associated with the basal ganglia of the brain. The experimental observations which have been made are in many cases uncertain and conflicting and it is rare to find cases clinically in which the lesions are so definitely localised as to be of any value in arriving at a correct decision as to the functions of the parts concerned. The chief interest of the case which we have just described lies in the fact that the lesion found at the necropsy was apparently strictly confined to the right optic thalamus, although one cannot entirely exclude the possibility of there having been during life some pressure upon the surrounding structures. The salient features of the case were: (1) "champing" movements of the jaws; (2) athetoid movements of the arms; (3) conjugate deviation of the eyes; and (4) thermal

[1] Vol. xxx., p. 129.

disturbance. In connexion with (1) we may cite the experiments performed by Bechtherew[2] who found that stimulation of the optic thalami in rabbits set in action a complex of movements necessary for the nutrition of the organism, beginning with those of mastication and deglutition and ending with those of the bowel. (2) An interesting feature of this case was that the athetoid movements affected both sides of the body and were not, as is more common, solely confined to the side opposite to the lesion in the optic thalamus. In this connexion we may refer to the experiments by Nothnagel,[3] who found that animals in which the optic thalami were destroyed on both sides seemed to have lost the sense of the position of their limbs, since without being paralysed they allowed them to remain in any position in which they were placed. (3) It is probable that the conjugate deviation of the eyes, as also the left facial weakness, was due to irritation of the internal capsule. (4) It is noticeable that there was no considerable elevation of temperature until the last, when hyperpyrexia set in. It is possible that the latter event resulted from the hæmorrhage into the optic thalamus, leading to pressure upon the corpus striatum, for Hale White, in his experiments,[4] came to the conclusion that lesions of the optic thalamus do not cause pyrexia, whereas irritative lesions of the corpus striatum do.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

An Analysis of Forty-six Tabulated Cases of Cancer of the Breast.

A MEETING of this society was held on May 13th, Mr. ALFRED WILLETT, the President, being in the chair.

Mr. THOMAS BRYANT communicated a paper entitled "An Analysis of Forty-six Tabulated Cases of Cancer of the Breast which have been Operated Upon and Survived the Operation from Five to Thirty-two Years." The objects of the communication were: (1) the prospects of life after primary operations for cancer of the breast; (2) the question of recurrence of the disease at the seat of the primary operation and the second breast; and (3) the nature and effects of operation upon the progress of the disease. Mr. Bryant had always felt that the three years' freedom from recurrent disease after a primary operation, which had been laid down as an indication of a cure of cancerous disease, was not only unreliable but misleading; and he had repeatedly demonstrated this. He proposed to divide his cases into three groups. Group I. of the cases included 17 cases of cancer of the breast relieved by operation which were now alive or had died without evidence of recurrent disease five or more years after operation. Taking the whole group of 17 cases together there was an absence of any evidence of recurrent disease from five to 10 years after the primary operation in nine cases and from 10 to 20 years in eight cases. 13 of these patients were now alive and apparently well. Mr. Bryant's routine operation was to remove the whole mammary gland with the skin and fat over the diseased area; and in every case, for examination purposes, to cut into the axilla and to take away glands or lymphoid tissue which appeared to be suspicious. The pectoral muscle he dissected clean but he did not remove it unless it were invaded by disease. He regarded the removal of the muscle as a routine measure to be unnecessary. Group II. included 19 cases of cancer of the breast relieved by operation and followed by recurrence in the seat of the primary operation. In three of the cases recurrence took place in the scar of the primary operation and a second operation was performed one year after the primary; two of these three cases were well and in good health four years later and in the third case 10 years later. In nine cases recurrence occurred from three to seven years after the primary operation. In three of these no second operation was called for. Group III. included 10 cases of recurrent disease after operation in which the second breast was involved and four cases in which the breast disease was associated with cancer of other parts of the body. Looking at the tables submitted as a whole it was evident that the interval which might take place between the primary amputation of a breast for cancer and its recurrence in the scar or the second breast, when such occurred, was most uncertain. That whilst in half the cases tabulated recurrence took place in five years or less, in the second half the interval before recurrence appeared varied from six to 32 years, and that in at least two-thirds of these cases it occurred after 10 years. With respect to the seat of the recurrence it seemed that this was in or about the scar of the original operation in 14 cases; in the scar and axilla in only one case; in the sternum in three cases; in the second breast in 10 cases, and in five of these 10 the scar of the first operation was likewise involved. In only one case was the axilla cleared out in an operation for a recurrent affection. It was not his custom to clear it out in all, and yet these results did not suggest an inadequate operation. It was shown that operations for cancer of the breast, when undertaken at an early period of the disease, were not so unsatisfactory in their ultimate results as was generally believed. In cases of recurrence not favourable for operation unless the removal of the ovaries could be shown in the future to be successful the x rays should be employed, for the benefit which had been derived by this treatment when judiciously applied by men of understanding had in his experience been so successful as to raise hopes which he hardly liked fully to express and at the same time seemed to be free from danger or serious consequences when utilised by those who knew the dangers of penetrating rays carelessly employed and the difficulties with which the practice bristled. The influence of the rays, to make them effective, must be maintained for several months after it had seemed to be beneficial; a three months' course with about three applications a week appeared to be the shortest from which any permanent good was to be expected.

Sir WILLIAM M. BANKS congratulated Mr. Bryant on his paper. He (Sir William Banks) had had a wide experience of mammary cancer. In former times 10 out of every 100 cases he operated on died. This was due to the insanitary state of the hospital in which the operations were done. The hospital was rebuilt and now out of between 90 and 100 cases there had only been one death. Anything more erroneous than the rule that cancer cases could be regarded as "cured" after three years of non-recurrence could not be imagined. Out of 58 cases which he had operated on, and which he had followed up with the greatest care, six cases died from local recurrence (four in from five to 10 years and two in 12 and 14 years). 12 cases died from general but no local recurrence (nine of these cases lived from five to 10 years and three died at 10, 10, and 14 years respectively). In 12 cases there was no return, the patients living from five to 18 years; 14 patients were still alive and well after from five to 10 years, 12 after from 10 to 20 years, and two after from 20 to 23 years. It was most essential to take the case for operation early. That was the most important point in the whole matter. The disease, in his opinion, came back in the lymphatics of the skin around the scar and therefore it was very important to remove the skin liberally at the time of operation. Halsted's operation was wholly unnecessary. When the cervical glands were involved the case was beyond the reach of surgery; when they were not such an operation was both dangerous and unnecessary.

Mr. BRYANT, in reply, agreed with Sir William Banks that the large and so-called "adequate" operations were dangerous and wholly unnecessary. It was possible to do all that surgery could do by more moderate means.

Mr. RICKMAN J. GODLEE communicated a contribution to the study of Tropical Abscess of the Liver which will appear in our columns next week with the discussion thereon.

[2] Neurologisches Centralblatt, 1894, p. 580.
[3] Topographische Diagnosis der Gehirnkrankheiten, 1879.
[4] Alteration in Bodily Temperature in Lesions of the Brain: Brit. Med. Jour., 1891, vol. i., p. 569.

MEDICAL SOCIETY OF LONDON.

Annual General Meeting.—The Diagnosis of Malaria from the Standpoint of the Practitioner in England.—Election of Officers.

A MEETING of this society was held on May 12th, Dr. W. H. ALLCHIN, the President, being in the chair.

The annual report of the council setting forth the work of the society was presented. The librarian's report referred to

the gradually increasing use which the Fellows were making of the library. Dr. J. B. NIAS had been engaged on the work of examining the Greek MSS. belonging to the society. The House and Finance Committee presented its report. All these reports were unanimously adopted.

Dr. PATRICK MANSON, C.M.G., gave an address on the Diagnosis of Malaria from the Standpoint of the Practitioner in England which appears in full at p. 1377 of our present issue.

The PRESIDENT warmly congratulated Dr. Manson upon the valuable and practical address delivered before the society and after a few remarks by Dr. C. E. BEEVOR and Dr. T. D. SAVILL, Dr. MANSON briefly replied.

The following gentlemen were elected to the several offices mentioned for the session 1902-3: President: Mr. A. Pearce Gould. Vice-Presidents: Dr. Thomas T. Whipham, Mr. Charles A. Ballance, Dr. Frederick S. Palmer, and Mr. Henry Morris. Treasurer: Dr. David H. Goodsall. Librarian: Dr. Arthur Francis Voelcker. Honorary Secretaries: Mr. Jonathan Hutchinson, jun., and Dr. Henry A. Caley. Honorary Secretary for Foreign Correspondence: Dr. Humphry D. Rolleston. Council: Dr. William Henry Allchin, Sir William M. Banks, Mr. Arthur E. Barker, Mr. J. Bland-Sutton, Dr. Charles W. Chapman, Dr. J. Walter Carr, Mr. Frederic Durham, Dr. William Ewart, Dr. Robert A. Gibbons, Dr. Samuel H. Habershon, Mr. Walter H. Jessop, Mr. Howard Marsh, Mr. C. W. Mansell Moullin, Dr. Isambard Owen, Dr. H. Campbell Pope, Dr. Arthur H. Robinson, Dr. J. S. Risien Russell, Mr. Edgcombe Venning, Mr. Herbert F. Waterhouse, and Mr. Edwin F. White.

CLINICAL SOCIETY OF LONDON.

Congenital Lymphangioma terminating in Lympho-sarcoma.—Primary Sarcoma of Synovial Membrane.—"Horizontal" Dilatation of the Left Auricle.—Intercostal Pulsation in a Case of Mitral Stenosis.

A MEETING of this society was held on May 9th, Mr. HOWARD MARSH, the President, being in the chair.

Mr. W. G. SPENCER read a paper on a case of Congenital Diffuse Lymphangioma terminating in Lympho-sarcoma after Lymphangitis with a Continuous Hectic Fever for three months affecting the lower extremity of a girl, aged four years. The patient was born with the right leg longer than the left. It caused no uneasiness until without any assignable cause it became swollen by inflammation immediately before coming under observation. For the three months preceding death there were marked and continuous hectic fever, and an evening temperature of 103° F., with a fall to a subnormal morning temperature of 97° F. or even 90° F. The pulse throughout was about from 130 to 140, on many days rising to 170 or even 180 per minute. First the leg, then the thigh, and finally the hip, the loin, and the groin became swollen. There was no change in the skin, but small incisions allowed serous fluid to escape, containing fibrinous casts of the dilated lymphatic spaces. No chylous fluid ever escaped, nor did lymph vesicles form on the skin, nor did the skin become rugose. At the necropsy the swelling of the thigh and hip region was found to be due to dilated lymphatic spaces with intercystic masses of lympho-sarcoma, as shown in microscopical sections. Other cases, including macroglossia, in which congenital lymphangioma had terminated in lympho-sarcoma, were mentioned.—Dr. H. D. ROLLESTON asked what were the naked-eye evidences that the morbid growth was lympho-sarcoma? Lympho-sarcoma had well-defined macroscopical and microscopical characters, and in the specimens under the microscope he did not recognise the definite reticulum and other features belonging to this neoplasm. The case before the society resembled sarcoma which had arisen in lymphatic glands.—Mr. SPENCER, in replying, referred to the temperature records and clinical history, and said that the secondary growths all consisted of the small round-cell growth supported by a reticulum, so typical of lympho-sarcoma.

Mr. G. R. TURNER communicated a case of Primary Sarcoma of the Synovial Membrane of the Ankle-joint. The patient was a man, aged 28 years, who two months before admission into St. George's Hospital knocked his foot against a brass screw. Three weeks after this he noticed a swelling in front of the right ankle. This had slowly increased in size and measured about one and three-quarters by one and a half inches. There was no obvious connexion with the tendons. When removed it was found to be growing from the synovial membrane of the ankle-joint. Dr. Rolleston had examined the tumour and had reported it to be a fibrifying and chondrifying mixed-cell sarcoma. Attention was drawn to the rarity of *primary* sarcoma of the synovial membranes. Myelomata of tendon sheaths were much more commonly met with and were innocent clinically. Reference was made to a case recorded by Mr. Howard Marsh of primary sarcoma of the synovial membrane of the knee-joint. Mr. Turner's patient had been exhibited at a clinical meeting of the Clinical Society of London in the early part of this year.

Mr. C. B. LOCKWOOD communicated a case of Sarcoma of the Synovial Membrane of the Knee-joint. The patient was a young married woman who had had disease of the right knee of three years' duration. The joint was slightly flexed but possessed almost its full range of movement. The capsule was distended by a swelling of the synovial membrane which made the circumference of the joint three-quarters of an inch greater than that of its fellow. The surface of the swelling was rather warm and it was tender on pressure. A consultation was held and the opinions were almost unanimously in favour of the disease being tuberculous. As no treatment had been tried it was thought well to rest the joint and to apply a splint. Nothing was seen of the patient for about a year when she returned with what appeared to be well-marked tuberculous disease of the knee. A resection was performed and the absence of any evidences of caries and of pus excited some suspicion. The material was examined by two pathologists and was pronounced by one to be "spindle-celled sarcoma" and by the other to be "oval-celled sarcoma." Mr. Lockwood discussed the diagnosis and adverted to the very close resemblance which the symptoms presented to those of tuberculous joint disease. In fact, when the case was first seen there were only two points which might have excited suspicion that the disease was not tuberculous: (1) the absence of muscular wasting; and (2) the free and painless mobility of the joint after having been the seat of disease for three years. There was no doubt, however, that the case was one of sarcoma starting in, and involving, the synovial membrane.

The PRESIDENT, in the discussion on these two papers, referred to the case which he had reported in the thirty-second volume of the Transactions of the Clinical Society of London. The patient, a man, aged 21 years, was admitted into St. Bartholomew's Hospital on account of a swelling in the knee which had existed for 15 months. When the knee-joint was opened the growth was found to be surrounded by synovial membrane. The growth was removed and recurrence took place five times, the first time after three years, and the last time six years from the time he came under observation. On the last occasion the leg was amputated. It was remarkable to note how the growth successively affected different portions of the synovial membrane. Microscopical examination showed that it was a spindle-celled sarcoma. The patient was at the present time alive and was free from any return of the disease. By a curious coincidence he was in the hospital a few days ago with consolidation in one lung. Knowing his history it was feared that the lung was the seat of growth, but the lung trouble had cleared up. A short time ago the President had seen a young woman, aged 22 years, with a condition very like that found in Mr. Turner's case, except that the tumour was in the knee. When the joint was opened the growth was almost pedunculated. It proved to be a sarcoma. Mr. Lockwood had dwelt on a very important point—namely, the obscurity of the diagnosis in these cases. He had remarked that the temperature had led him to suppose that the disease was tuberculous, but this was not really a trustworthy guide in differential diagnosis, because malignant growths in joints were not infrequently found to be associated with high temperature.—Mr. SPENCER called attention to an important point of difference between Mr. Lockwood's case and those of Mr. Turner and of the President. In the former the growth was diffused, whilst in the latter it was localised. The President's case appeared to resemble a class of tumour recently referred to in another society as "endotheliomata." With regard to diffuse growths in the synovial membrane as distinct from tuberculosis he had seen two cases which were put down as "rheumatic"

without any sufficient evidence for this view. Mr. J. Hardie of Manchester had described in THE LANCET of June 30th, 1894, p. 1619, a sarcoma occurring in the synovial membrane of the knee-joint. These rarer forms of sarcoma affecting synovial membrane appeared to run a different course from that observed in the case of sarcoma attacking bones.—Mr. TURNER, in reply, said that the discussion had shown, as Mr. Spencer had pointed out, that these sarcomata were of two kinds, the circumscribed and the diffuse. In his case tuberculosis was not even thought of before operation; the diagnosis lay between some kind of new growth and a bursal cyst.—Mr. LOCKWOOD also briefly replied, laying emphasis on the mobility of the joint as a means of diagnosis from tuberculous disease.

Dr. WILLIAM EWART and Dr. ISAMBARD OWEN communicated a case illustrating the clinical feature of "Horizontal" Dilatation of the Left Auricle. This condition had been brought before the Clinical Society of London by Dr. Isambard Owen and Dr. W. J. Fenton in 1901.[1] In that case enormous dilatation of the left auricle took place outwards and towards the right and it was remarkable how little pain and what few subjective symptoms were exhibited with the lesion. The diagnostic features of the condition were systolic pulsation (synchronous with the apex beat) in the right fourth intercostal space, great increase of the precordial dulness transversely even to, or beyond, the right mammary line, a similar increase in the post-cordial dulness, occasional pulsation of the liver, and cyanosis and dyspnœa without anasarca or dropsy of the serous cavities. Dr. Ewart and Dr. Owen commented on the latency and insidiousness of the affection and hoped in the future to be able to diagnose the condition by skiagraphy. Rest and venesection seemed to be important means of treatment.

Dr. ISAMBARD OWEN also contributed a paper on "Horizontal" Dilatation of the Left Auricle, with special reference to other cases and specimens besides the one which he had exhibited with Dr. Fenton[2] in May, 1901. Inquiries at all the principal museums and medical schools in the United Kingdom had shown that only three other specimens were known to be in existence; one of these was at St. Bartholomew's Hospital and one at University College. These were briefly described, after which Dr. Owen compared and contrasted the most important clinical and pathological features of the three cases. In all these cases the pericardium was adherent and in none of them was there any definite lesion of the mitral orifice. In one of these cases it was possible to place a rod eight inches long transversely in the auricle, thus resembling his (Dr. Owen's) original case which presented in the right axilla and had been mistaken for pleural effusion. He (Dr. Owen) thought the term "horizontal dilatation" appropriate to distinguish this rare condition from the more usual spherical or vertical dilatation.—Dr. ARTHUR F. VOELCKER, referring to the case under Dr. Ewart's care, asked if there was a murmur in the tricuspid area, because he thought the pulsation observed in the fourth right interspace might be derived from the right auricle rather than the left. The pulsation of the liver supported this contention.—Dr. W. P. HERRINGHAM entirely concurred with the last speaker as regarded the pulsation observed. He thought all the signs described in Dr. Ewart's case might be produced by dilatation of the right auricle, excepting the percussion signs at the back, which needed confirmation. There were some discrepancies in the charts of posterior percussion dulness exhibited which needed explanation.—Dr. EWART, in reply, admitted that the right auricle in his patient might also have been dilated. Pulsation systolic in rhythm was not met with in connexion with right auricular enlargement. He relied on other symptoms also for the diagnosis of the condition and the absence of the secondary evidences of cardiac failure on the right side of the heart, such as dropsy in the serous cavities and anasarca.

Dr. EWART communicated a note on Palpable Systolic Intercostal Pulsation in a case of Mitral Stenosis with Dilatation and Thrombosis of the Left Auricle occurring in a woman, aged 24 years. The purport of the communication was to elicit further information concerning the significance of systolic pulsation of the right auricle, its diagnostic value, and frequency of occurrence.

[1] Transactions of the Clinical Society of London, vol. xxxiv., p. 183.
[2] Ibid., vol. xxxiv., p. 185.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases, &c.—20 Cases of Gastro-Enterostomy performed for Intrinsic Stenosis and Tumour of the Pylorus.—Cyto-diagnosis of Pleural Effusion.

THE ninth ordinary meeting of this society was held on May 7th, Professor T. R. FRASER, F.R.S., the President, being in the chair.

Professor HENRI HUCHARD of Paris was elected a corresponding member of the society.

Dr. NORMAN WALKER exhibited four patients treated by various methods of Photo-therapy.

Mr. H. ALEXIS THOMSON demonstrated a patient after removal of Hyperostosis of the Upper Jaw and Malar Bone of the left side. The condition was congenital but the increase in size of the jaw had been greater since the girl was struck by a stone some years previously. The bony excretion was removed by an incision much the same as that employed in removing the upper jaw. The bone was found to be very soft and cut like hard cheese.

Dr. R. MCBRIDE showed a girl the Bridge of whose Nose had been Restored by Injecting Paraffin.

Mr. HAROLD J. STILES exhibited the following cases. 1. A boy after operation for large Intradural Abscess following middle-ear disease. The boy was admitted to hospital four weeks previously suffering from slight paralysis of the left arm and with a discharging sinus on the right side of the scalp. The probe passed down through the skull and into the cranial cavity. In November of last year the boy had suffered from an ordinary middle-ear catarrh. Subsequently he had a convulsion with paralysis of the left arm. About a week previously to his admission a large abscess formed in the fronto-parietal region and this was opened. There were now complete optic atrophy of the right eye and partial optic atrophy on the left side. At the operation a large abscess was found between the meninges the result of lepto-meningitis secondary to the ear disease. The boy had improved greatly. 2. A girl after treatment of Congenital Dislocation of the Hip by Lorenz's method. The case showed the great importance of early diagnosis of such cases as cure depended on their early treatment.

Dr. A. BRUCE showed the following cases. 1. A woman suffering from Complete Paralysis of Conjugate Deviation of the Eyes to the Left with almost complete retention of such movements to the right. There was slight left facial paralysis. The condition resulted from a fall. The lesion was necessarily of the sixth nucleus. Convergence of the eyes was retained. 2. A woman with Spasm of Convergence. She had become run down in health and had suffered from dimness of vision, at first only once in a few days, but latterly this had become more frequent and then remained permanently when she looked at a near object. This condition of spasm of convergence could not be unlocked until light was excluded from the eyes. 3 and 4. A girl, aged 12 years, and a boy, aged nine years (brother and sister), who were suffering from Spastic Paralysis following Pertussis. Until five years ago they were in perfect health, when they took whooping-cough. The boy had a convulsion at that time. About a year subsequently to the pertussis the boy began to suffer from weakness of one leg and later of the other. The girl soon followed in a similar way. Both became unable to walk and their mental condition also deteriorated. The boy exhibited the attitude of spastic paraplegia but these cases were not congenital. In both the knee-jerks were very exaggerated and ankle clonus was present. The cause was probably syphilis, as in both the teeth were typical and the forehead was characteristic. There was probably a meningeal thickening producing atrophy of the cortical centre for the leg and of the intellectual centres also. The pertussis was probably a mere predisposing cause.

Dr. W. G. SYM showed a girl who had Double Vision when looking to the right and especially when looking down and to the right. A spasmodic contraction of the right inferior rectus was the only condition which could give such an affection.

Mr. J. M. COTTERILL showed the following cases. 1. A woman with Multiple Scirrhus treated by oöphorectomy and the x rays. The right mamma was removed in June, 1900, but the growth recurred in the cicatrix as numerous nodules. The left breast was also the seat of cancer as were the glands in the axilla and the neck. As removal was out of

the question oöphorectomy was performed. Great improvement went on for four months when menstruation recurred and the tumours began to grow afresh. Dr. Dawson Turner had employed ultra-violet rays for five minutes every second day with excellent effect on the nodules on the right side. There were secondary nodules down the back and over the scalp. 2. A child with Multiple Tuberculous Arthritis (four large joints).

Mr. C. W. CATHCART demonstrated a Portable Stretcher adaptable to the Trendelenburg position.

Dr. G. H. MELVILLE DUNLOP and Dr. STUART MCDONALD showed a Liver from a case of Congenital Obliteration of the Bile-ducts.

Mr. F. M. CAIRD read a paper entitled, "Gastro-enterostomy—20 Cases performed for Intrinsic Stenosis and Tumour of the Pylorus." In this communication attention was drawn to the similarity between the symptoms and indications requiring gastrostomy and gastro-enterostomy. When there were difficulty in the onward passage of food, vomiting, progressive emaciation, anæmia, and subnormal temperature the operation could not be withheld long without incurring grave risk. It had been objected that gastro-enterostomy as practised in cases of malignant disease was an operation of grave risk, that it did not at all prolong the patient's life, and was of doubtful value. This view was controverted and it was maintained that even were life not prolonged the patients at least did not die from starvation, had less discomfort and pain, and did not of necessity face an ordeal of high mortality. It had been found a matter of experience, indeed, that as a result of the operation there was such a great gain in weight and bodily health that even in undoubtedly malignant cases there might arise a question as to the diagnosis. Moreover, in many of the cases the tumour had entirely disappeared. Of the 21 cases 20 were recommended as cancer, one was said to be innocent, due to gastric ulcer, and proved to be so. In every case save one a palpable tumour could be felt and in all it was found at operation. The chief symptoms were vomiting, emaciation, little or no free hydrochloric acid after a test meal, and other associated signs. Mr. Caird favoured the retro-colic operation of von Hacher but could not be certain that it made much difference whether the anterior or posterior method were used or whether the food current were isoperistaltic or antiperistaltic. It was largely a matter of convenience depending on the amount of disease and the mobility of the gastric organ, but he rather favoured a posterior gastro-jejunostomy as close to the duodenum as convenient, reserving the anterior operation for the more complicated cases. No special preparation of the patient was advocated prior to operation. The stomach was not washed out when the patient was unaccustomed to lavage or very weak on account of the tendency to syncope and prostration. After operation the patient received teaspoonfuls of warm water and milk at night if the general condition were good. A small dose of morphine was given for restlessness or pain. On the following morning, if there were eructations, tendency to vomit, sickness, or a rising pulse, the stomach was washed out. The great value of this after-treatment in all cases of gastric surgery was indicated. It frequently checked sickness at once and always did good, although here again the operator had to be prepared for an occasional dangerous syncope. Attention was drawn to the character, source, and quantity of the material evacuated. If the pulse did not fall after washing out then about 30 ounces of saline solution were transfused and always with benefit. Lavage and transfusion played a great rôle in after-treatment and might be judiciously repeated. Among the 21 cases four were fatal. The symptoms, causes, and treatment of the *circulus vitiosus* were discussed but no example of this condition had occurred. One male patient died from pleurisy, broncho-pneumonia, and congestion of the kidneys; the abdomen and field of operation were found to be normal. One woman died within 48 hours apparently from sheer weakness and another died from leakage. The disease had been so far advanced that the stitches were unfortunately planted in diseased tissue. The fourth was a case of peritonitis, probably due to aerial infection. The symptoms were very obscure and at the *sectio* there was found a purulent layer between the anterior parietal peritoneum and the anterior aspect of the omentum. The wound and field of operation were intact and healthy. Of the 17 patients who survived the operation six were known to be dead; three died from extension of the disease, two from sudden cardiac failure, and one from phthisis. Eight patients were alive after periods varying from six years, two years, and for less periods. Three had been lost sight of and probably were dead. At the time of operation all the patients were extremely emaciated. Thereafter they gained flesh rapidly and in many the tumour seemed to vanish and was no longer palpable. One case operated on in 1896 had been re-opened for a ventral hernia at the cicatrix and no trace of tumour or glands could be discovered. A second patient operated on in 1900 had also been subjected to a second laparotomy on account of the appearance of a few nodules on the cicatrix. The abdomen was found to be healthy. The tumours had almost gone; the nodules showed typical carcinomatous structure. The question might be raised whether these cases, which had survived say six months, were really cases of malignant disease after all. There could be no doubt that the diagnosis between simple inflammatory hyperplasias which simulated cancer and true cancer was extremely difficult, yet it would be extraordinary were able physicians so frequently in error. Again, the cases of slow-growing gastric carcinoma reported by Strüdel and others must be remembered, where after an exploratory laparotomy alone and closure of the abdomen the patient survived for several years. The great and rapid improvement in the health of all the above patients, however, could only be ascribed to the gastro-jejunostomy and not to the mere exploration and it offered strong encouragement to give the patient at least the advantage of a probable palliation and not to relegate him to the class of hopeless incurables.—Professor J. CHIENE and Mr. ALEXIS THOMSON took part in the discussion which followed.

Dr. G. LOVELL GULLAND read a paper on Cyto-diagnosis of Pleural Effusions. He stated that there were several varieties of pleural effusion, such as empyema, where an examination of the cells in the fluid was unnecessary, the organisms which caused its production being alone important. In serous effusions, however, the cells were of importance. Pleurisy was one of the commonest of acute chest affections and for many years it had been a matter of discussion whether the common acute serous pleurisy was rheumatic, tuberculous, "idiopathic," or due to acute infection. At one time all serous pleurisies were considered to be "rheumatic," at another idiopathic, and more recently the tendency to regard them all as tuberculous had been steadily growing. The immediate treatment necessarily differed according as one regarded a pleurisy as tuberculous or as idiopathic. A certain proportion of cases did not come into consideration—e.g., those in which a pleurisy supervened in the course of phthisis already diagnosed. There were many cases, however, where the lungs gave no help and where the pleurisy occurred in apparently healthy individuals. Here all the ordinary means of diagnosis might be exhausted without a decision as to the nature of the case being arrived at. The case might be really tuberculous, but the physical signs might be so slight as to pass unnoticed, and if the pleura of the more seriously diseased lung were attacked the effusion might conceal the disease by relaxing the lung or limiting the movements of the affected side so as to weaken the breathing. On the other hand, bronchial breathing and other auscultatory signs might be caused by the effusion itself and could not be referred to a pre-existing tuberculosis. For similar reasons tubercle bacilli might be sought for in vain in the sputum. Either there was no sputum or what there was came from the unaffected lung or from the trachea and bronchi and not from the relaxed lung. The injection of tuberculin for diagnostic purposes was also useless, for in almost all such cases the patients suffered from pyrexia. The sero-diagnosis of tubercle had so many technical and other difficulties that for practical purposes it was useless. The morphological examination of the blood did not give much help, as in slight and chronic cases the blood was practically normal, while in severe cases the leucocytosis might be high. The differential leucocyte count had not yielded any definite indication. In the absence of general indications the fluid drawn off by puncture fell to be examined. In fresh exudate organisms might be discovered either by culture or by the microscope, but the fluid was strongly bactericidal, and after some time the organisms ceased to be capable of cultivation though they might still be found in the fluid. It was true that in undoubtedly tuberculous cases it was only very rarely possible to demonstrate tubercle bacilli, either because very few bacilli were present, because they were destroyed or

rendered incapable of growth by the fluid, or because the effusion was due to toxins rather than by the organism itself. In examining the cells in the exudate the methods were simple. The syringe was to be sterilised, by boiling by preference, and it must hold enough fluid to allow of its being centrifuged. If the cells were numerous in the fluid cover-glass preparations might be made directly and without using the centrifuge. Dr. Gulland generally fixed the films by his formalin-alcohol method. The tri-acid stain was not very serviceable but eosin and methylene blue and Jenner's stain had proved of the greatest use. To show the granules in the polymorphonuclear cells or other changes Sudan followed by hæmatoxylin when fat was in question or iodine when glycogen had to be looked for had to be employed. The cells found in exudates might be classed according as they were derived from the blood or from the tissues. Red blood-corpuscles and leucocytes were, of course, present; also polymorphonuclear neutrophiles and the lymphocytes of various sizes. Basophile leucocytes were occasionally met with but eosinophiles were almost never seen. The red corpuscles showed no change of importance. The polymorphonuclear neutrophiles might resemble exactly those seen in the blood and usually did so in fresh effusions, but in older effusions degenerative changes were present in such cells. The cell body in such might undergo a simple dissolution, so rendering the granules free in the fluid, or it might undergo a fatty degeneration. The latter was very rarely seen in cells circulating in the blood but was fairly common in exudates. Glycogenic degeneration of the cell body was also more frequently observed in such exudates than in the blood. The nucleus of the polymorphonuclear neutrophiles might simply lose its power of taking up basic stains and might look faintly coloured. Most frequently, however, it lost the intranuclear network and stained deeply and homogeneously. The lobes also often separated one from another and broke up into fragments, each taking a part of the cell body with it, or the nucleus as a whole ran together into a ball and stained homogeneously. Such deeply stained nuclei had been mistaken for nucleated red corpuscles. The lymphocytes usually exactly resembled those of the blood and did not appear to degenerate nearly so frequently as did the polymorphonuclear cells. In simple effusions the cells were derived from the endothelial surface of the pleura. These sometimes occurred in clumps but more often they were single. They were larger than leucocytes usually, had a round or oval nucleus and a large cell body with a regular though more frequently a ragged outline. Fat droplets sometimes were found in the cell body. As regards tuberculous effusions the description differed according to whether the effusion was examined during the first three days or later. At first the cells were mainly polymorphonuclear, but by the third day these had largely disappeared and were replaced by lymphocytes. In an established tuberculous pleurisy the microscope showed lymphocytes, red blood corpuscles, a few polymorphs in some cases and sometimes a very few endothelial cells. The lymphocytes ought to be at least half of the true cellular elements, while in most cases they reached four-fifths or even more. Dr. Gulland had drawn attention to the degenerative changes in other cells which caused them to look like lymphocytes because of the great importance which a true lymphocytic effusion had. He had seen effusions in which the degenerated polymorphs which simulate lymphocytes were at least as numerous as the unaltered polymorphs and so it would have been easy to come to an erroneous conclusion as to the nature of the case. The small number of endothelial cells present was generally explained by assuming that the exudation rapidly covered the pleural surface in these cases. As to effusions due to the pneumococcus and streptococcus, these organisms, and probably all others which could cause purulent effusion, had when the effusion was in the serous stage the same result—a great preponderance of polymorphonuclears, unaltered or degenerated, as the case might be, and often numerous endothelial cells, fresh or degenerated. Red corpuscles might also be present. The relations between polymorphs and endothelial cells varied greatly in different cases; the more acute the case and the more likely to go on to empyema the more polymorphs would, as a rule, be present. As regarded œdematous effusions, whether such arose from heart or kidney, the cells were almost always very few in number and were mainly endothelial in type. In cases where a pulmonary apoplexy occurred in a lung the pleuræ of which already contained fluid polymorphs appeared in the fluid. Dr. Gulland then passed on to speak of malignant pleurisies. As a rule cells of the malignant growth would be present in the fluid, often in large numbers. They were frequently swollen and œdematous and they presented abnormalities in the nucleus. They were often fattily degenerated. A certain proportion of polymorphs was present. Dr. Gulland had found cyto-diagnosis distinctly useful and by its aid he had been able to free some people from the suspicion of tubercle, though, unfortunately, he had had to condemn others and he hoped that it might prove of equal value to observers when associated with minute investigations in other directions.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF STATE MEDICINE.

Lead-poisoning.—Milch Cows and the Tuberculin Test.—Inspection of Dairy Sheds.

A MEETING of this section was held on April 25th, Dr. NINIAN FALKINER, the President, being in the chair.

Dr. F. C. MARTLEY, honorary secretary of the section, read a communication from Dr. R. B. McVittie on a case of Lead-poisoning. The patient, a man, aged 58 years, after three months' residence in a new house began to complain of general malaise, muscular weakness, and abdominal pains. Two months later he suffered from vomiting, constipation, and some loss of power in his hands. As he had no teeth the gums showed no lead line. The water-supply came from two wells situated above the house and was conveyed in iron pipes which ended in a few feet of leaden pipe to which the tap was attached. Water taken from the tap was found to contain 1·67 grains of lead per gallon, that from the wells was pure, soft, and slightly peaty. Since discontinuing the tap water he had become completely well. Of all the household he alone was affected; this was probably due to his age and to his having lived for some time both in India and in Burma.—Sir CHARLES A. CAMERON said that the case was of interest from the exceptionally large amount of lead present, this being greater than was usually found except in acid solutions. The water-pipes used in Dublin consisted of an alloy of lead, 96·5 per cent., and tin, 3·5 per cent. This had after years of trial, been found to resist the solvent action of water.—Dr. DE LISLE of New Zealand, a visitor, said that in New Zealand lead-poisoning was practically unknown. He had seen two cases only and they were in painters. He ascribed the immunity to the hardness of the drinking-water in the towns. Before he settled in New Zealand he lived in Sydney and whilst lying ill with typhoid fever in the General Hospital of that city he saw many cases, the victims being heavy beer-drinkers whose liquor had been contaminated with lead from the leaden pipes of the beer-machines. The drunkards of Sydney were beer-drinkers; the moderate drinkers took whisky.—The PRESIDENT made a reference to a meeting of the section in 1873, when Dr. O'Carroll brought the subject of lead-poisoning from hair-dyes under notice.

Professor E. J. MCWEENEY read a paper on the Infectivity of the Milk of Cows which Reacted to the Tuberculin Test but were not Clinically Tuberculous. He said that it was a problem whether the milk of cows that reacted to the tuberculin test should be permitted to be sold for human consumption. He commenced his experiments by trying to learn the percentage of milch cows that reacted to the test. For this purpose he examined a herd of cattle numbering between 80 and 100 animals that was kept under hygienic conditions very much superior to those of ordinary herds, and of these cattle kept under the most favourable conditions 50 per cent. reacted positively to the tuberculin test. He afterwards, in the south of Ireland, examined a herd of cattle that was not kept under the same favourable conditions, and of these from 80 to 90 per cent. reacted to the tuberculin test. To decide that the milk of animals that reacted to the test was unfit for food would be to cut off the milk-supply and would be impracticable. Some of the animals vigorously reacted to the toxin, the temperature rising from normal to 105°, 106°, and even to 108°F. Strange as it might appear, he found the infection to be inversely proportionate to the extent of the tuberculous lesion, the possible explanation of which might be that the animals which were clinically tuberculous had had their blood immunised by the toxin already in their

bodies and injected tuberculin produced a slight, if any, reaction. In the animals in which violent reaction took place he found not more than one or two caseous glands, most commonly in the posterior mediastinum. All these statements were based on post-mortem experiments, for every animal which he experimented on was afterwards killed. Animals that had encysted little masses of tubercle gave milk in which tubercle bacilli could not be found. He then described a series of experiments instituted for the purpose of testing the effects of the milk of cows giving a reaction to tuberculin but not clinically tuberculous. It must be remembered that "acid-fast rods" simulated bacilli and had been mistaken for them. Almost identical experiments, but conducted on a much larger scale, were carried out in Berlin by Perstatay who fed young animals, calves and pigs, on the milk of cows which were tuberculous but in which the disease was not clinically demonstrable. The calves were fed for two months and the pigs for seven months on the milk and in not a single instance did tubercle develop. The milk was perfectly innocuous. On the other hand, the disease was in a very infectious form when the cow's udder was infected, for the least amount of tubercle in the udder made the milk poisonous. Dr. Bang of Copenhagen gave a litre of milk drawn from a cow with a tuberculous udder to a pig and the animal died in a short time as if poisoned. The percentage of tuberculous cows whose udders were tuberculous was calculated to vary from 2 to 4 per cent. Professor McWeeney said that he had never come across a case of infected udder, but there should be no difficulty in recognising it and any educated veterinarian should be equal to the task. So far as his experience went he considered bovine tubercle to be capable of infecting the human being.

Sir CHARLES CAMERON read a paper on the Inspection of Dairy Sheds. He thought that dairy inspectors should not be satisfied with the sterilisation of the milk and other matters appertaining to the hygiene of the cowsheds and that the dairy should be looked after. Inspectors in rural districts were not at all so careful as were those in Dublin, neither were the rural cowsheds and attendants as clean as the city sheds and attendants. The recent Vice-regal Sanitary Commission declared that the cows in the city dairy-yards were much better fed than were those in the rural districts. The Dublin cows were sent to grass for seven months of the year; their milk contained 14 per cent. of solids as against 12 per cent. in the country. A veterinary surgeon examined their udders regularly during the winter season and the personal cleanliness of the attendants was ensured by a by-law which made dirty hands punishable by a fine and during the last year 40 milkers were fined for having their hands dirty.—Professor MCWEENEY said that a codification of the sanitary laws was a necessity; as things were a whole library of legal books was wanted to find out the law of sanitation. Sterilisation of milk was out of the question, it made ordinary milk unsightly and unpalatable and spores resisted boiling for three hours under a pressure of two atmospheres. Pasteurisation killed typhoid germs at a temperature of 140° F., and at 190° it killed the tubercle bacilli; no creamery should be allowed to vend milk until it had been properly pasteurised. As for the Dublin dairy-yards, he considered them to be a disgrace to civilisation; they were kept in an intolerably filthy state and, as for the attendants, he thought that if they had the German sanitary law in force in Dublin some 90 per cent. of the milkers would be arrested and forcibly washed. There could be no proper supervision of dairies without a bacteriologist; a veterinarian could not make an exhaustive microscopical examination of milk or perform the necessary biological experiments.

LARYNGOLOGICAL SOCIETY OF LONDON.—A meeting of this society was held on May 2nd, Mr. E. Cresswell Baber, the President, being in the chair.—Dr. A. Bronner showed macroscopical and microscopical specimens of a large Papilloma of the Left Maxillary Antrum which had caused destruction of the bone and was accompanied by an offensive discharge. It had been twice removed with a snare and the second time without recurrence.—Dr. J. Walker Downie showed (1) a specimen of Sarcoma of the Right Tonsil from a woman, aged 58 years, which was enucleated in September, 1890, and did not recur until after October, 1901; (2) a specimen from a man, aged 33 years, consisting of the Soft Palate, Fauces, Pharynx, Larynx, and Gullet, the seat of an Extensive Round-celled Sarcoma; (3) a large Fibrous Growth (removed November, 1892) from the Naso-pharynx of a boy, aged 11 years, who a year later developed symptoms of sarcoma of the left maxillary antrum; and (4) a large Fibrous Growth (removed Feb. 6th, 1901), from the Naso-pharynx of a boy, aged 14 years, followed by continued improvement in health, and with no local recurrence.—Dr. J. Donelan showed (1) a case of Laryngeal Stenosis in a man, aged 50 years, resulting from a large syphilitic ulcer of the left side of the larynx; and (2) a case of Syphilitic Contraction of the Posterior Pillars of the Fauces in a man, aged 44 years.—Dr. H. Tilley showed a case of Complete Occlusion of the Right Nasal Vestibule in a man, aged 32 years, following the insertion of a strong styptic for the arrest of epistaxis. The septum was deflected to the right, and Dr. Tilley said that he proposed to remove the scar tissue and at the same time to perform Ash's operation on the septum.—Dr. H. L. Lack showed the following cases. 1. A case of great Symmetrical Thickening of the Upper and Anterior Part of the Nasal Septum in a man, aged 33 years, who had been under constant treatment for the past 12 years for nasal obstruction. It had been cut away and cauterised many times, but had always recurred. 2. A case of Inherited Syphilis of the Nose, Pharynx, and Larynx, with Complete Occlusion of the Anterior Nares in a boy. The appearances in the pharynx and larynx closely simulated lupus but the ulceration which at first had existed about the right anterior nares had healed under iodide of potassium, leaving complete atresia. The left nostril was already occluded.—Dr. J. W. Bond showed a case of large Laryngeal Growth in a woman who had suffered from huskiness of the voice for 10 months. There was no history, or sign, or symptom of either tuberculosis or syphilis.—Dr. StClair Thomson showed a case of Glosso-labial Laryngeal Paralysis with Complete Paralysis of one cord and Adductor Paralysis of the other.—Dr. E. Law showed a case of Excrescences or Incrustations or Chalky Deposits low down in the Trachea.—Mr. R. Lake showed a case of Tuberculosis of the Larynx occurring in a man, aged 30 years, in which the epiglottis had been removed by means of the galvano-cautery snare. The stump had healed quite satisfactorily.—Dr. L. H. Pegler showed a case of Geographical Tongue occurring in a boy, aged 14 years.—Mr. F. H. Tod showed a case of Syphilitic Necrosis of the Intra-nasal Structures.—Mr. E. B. Waggett showed a case of Cystic Adenoma of the Pyramidal Lobe of the Thyroid Gland.

BRITISH GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on May 8th, Dr. Heywood Smith, one of the Vice-Presidents, being in the chair.—Professor Alfred Smith exhibited a Bilateral Intraligamentary Fibromyoma of 10 pounds Weight in Advanced Mucoid Degeneration removed on April 16th, 1902, from a woman who till last November had been in good health.—Dr. Bedford Fenwick showed a similar specimen of which the lower part on the right side had been embedded in the broad ligament; the upper part on the left had extended right under the ribs and was in extreme mucoid degeneration.—After the exhibitors had replied to some remarks made by Dr. Heywood Smith, Dr. J. J. Macan, Dr. H. Macnaughton-Jones, and Dr. Richard T. Smith, Dr. Macnaughton-Jones related two cases of Absence of the Internal Genitalia. The patient in the first case was a girl, aged eight and a half years. Abdominal symptoms led to recto-abdominal examination, as even after consultation with a physician no definite diagnosis could be made. A soft sausage-shaped tumour was felt by the rectum but no uterus could be detected. On operation the tumour proved to be a sacculated sigmoid, doubled down on the rectum and containing fæces, but the appendix, six inches long, was bound down to the floor of the pelvis and contained pus. There was no uterus or any adnexa. The appendix, which was ruptured in detaching it, was removed, and in spite of a fæcal discharge from the abdominal wound from the fifth to the eighth day and an intercurrent attack of cystitis the child made a good recovery. In the second case the patient was a woman, aged 32 years, who had suffered from persistent primary amenorrhœa, with headaches and molimina, from the age of 18 years. Sexual instincts seemed to be present as there had been a question of marriage, but the absence of the catamenia and uncertainty whether the marriage could take place had led to much mental depression and deterioration of health. The labia, clitoris, and urethral orifice were present but there was

no vagina, and bimanual recto-abdominal and recto-vesical examination proved the absence of the uterus, ovaries, and tubes, nor could any trace of such, or of a vagina, be found by exploration of an incision in the middle line into the fibro-muscular tissue between the bladder and the rectum. The patient's mental depression was much improved by the removal of all uncertainty as to her position. Her headaches turned out to be dependent on eye-strain due to hyperopic astigmatism which was completely relieved.—Dr. C. H. F. Routh, Professor A. Smith, Dr. S. J. Aarons, and Dr. Heywood Smith instanced similar cases and concurred that absence of the internal genitalia was not quite exceptional in women who were well developed externally and who had normal sexual instinct.—Dr. Macnaughton-Jones, in reply, spoke of the futility of unduly delaying diagnosis and continuing ordinary treatment in persistent primary amenorrhœa and of the importance of all cases being recorded in which the genitalia were absent.—Dr. Fenwick read a paper on Fifty Laparotomies which with 35 simple operations for the removal of ovarian cysts or uterine fibroids were the only cases in which he had opened the abdominal cavity from above during the last 16 months. These 50 were all more or less difficult operations and included the only fatal results he had met with in his abdominal sections for nearly three and a half years, two deaths after hysterectomy for malignant disease and for degenerated fibroids of the uterus both by a singular coincidence occurring in the first week of this month, but neither due, save indirectly, to the operation, the patients sinking from heart failure several days afterwards. The frequency with which fatty degeneration was caused by abdominal tumours, to which he had drawn attention some 15 years ago, seemed now to be generally admitted. The 50 operations included 24 for ovarian growths, of which five were malignant, the disease being removed in three, but in the other two it was too far advanced for extirpation; 14 for fibroid growths, in connexion with which he laid much stress on the importance of degeneration as an indication for interference and of pain in previously painless cases as a symptom of inflammatory change consequent on such degeneration; six for bilateral and three for unilateral (left) pyosalpinx, all associated with great and increasing pain, profuse menorrhagia, and marked loss of flesh and strength, and by vast improvement after operation; and one each for malignant uterine disease, extra-uterine fœtation, and abdominal hernia due to a fall down a flight of stairs after a previous abdominal section.—Dr. J. A. Mansell Moullin said that among 173 abdominal operations at the Hospital for Women, Soho-square, London, during last year they had had only eight deaths, of which seven followed operations not properly gynæcological; 57 ovariotomies, 21 hysterectomies, and five myomectomies without any mortality, the single fatal case being one of 22 oöphorectomies. These figures showed the position of special gynæcological work at the present day and would compare not unfavourably with the results of such work in general hospitals.—After some discussion by Dr. R. T. Smith, Professor A. Smith, Dr. Macnaughton-Jones, and Dr. Heywood Smith, Dr. Fenwick replied.

WEST KENT MEDICO CHIRURGICAL SOCIETY.—The seventh meeting of the forty-sixth session of this society was held on May 2nd.—The President, Dr. T. C. Meggison, delivered a presidential address on Migraine. After some preliminary remarks the speaker defined migraine or hemicrania and reviewed the different phenomena which go to make up an attack. The premonitory symptoms were discussed in detail, particularly those affecting the eyes. He remarked on the fact that many persons were first attacked in the early hours of the morning and also how impossible it was for the physician to appreciate the suffering on an ordinary professional visit. The situation and character of the pain, the gradual increase in intensity, the alternation from one side to the other, the sickness and prostration, and the aggravation of the symptoms by light, noise, &c., were rapidly passed in review. He noted the alteration in pulse and temperature and described in detail the three principal varieties. He combated the theory of eye-strain being the sole cause and stated that he had long been of the opinion that there was some other influence at work. The history of his own cases showed a decided tendency to transmit the complaint. He considered that there was a great deal of evidence to show that migraine was due to toxins formed in the intestine but only absorbed into the system at certain times, such as during menstruation, after a shock, prolonged fatigue, or excitement. Acting on this theory he had tried washing out the system by large draughts of water with some measure of success but the disadvantages were obvious. Washing out the intestines by large enemata had been of benefit in various cases, though many had suffered from headache during the process. The result was certainly encouraging. For some time he had tried giving an enema whenever an attack seemed imminent with the most gratifying result, the patient generally experiencing complete relief, though sometimes the attack was merely shortened. Various patients had been treated in this way with the same benefit. In other cases washing out had been first performed and then the bowels had been kept clear by mild laxatives with decided success. From these results he was of opinion that migraine did not depend on a single cause but that in all cases there were two or three factors at work and that most probably auto-intoxication was one.—After the address an enjoyable smoking-concert was held. Mr. R. F. Tyler presided at the piano and songs, recitations, and violin selections were contributed by Dr. James Donelan, Dr. R. E. Scholefield, Dr. T. E. White, Mr. R. V. Donnellan, Dr. F. S. Toogood, Dr. H. Bowen Williams, Mr. Samuel Masters, and Mr. Wilson James.—The annual dinner of the society will be held at the Café Monico on Thursday, June 19th.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on May 9th, Dr. Arthur T. Davies, the President, being in the chair.—Dr. Leslie Durno read notes of two cases of Pemphigus Neonatorum. The mother of the first child suffered from moist eczema at the time of her delivery. Her child developed vesicles on the third night. These quickly multiplied until the skin, save only that of the palms of the hands and soles of the feet, was affected, yet the constitutional disturbance was slight. Healing took place in 14 days except in those parts kept moist by the urine and fæces. The rash of the second child began on the sixth night and was severe, closing the eyelids and producing a good deal of general disturbance.—Dr. J. R. T. Conner thought that such cases were impetigo contagiosa and not true pemphigus—that they were the product of staphylococcic infection and were curable by antiseptics.—Mr. W. Campbell M'Donnell related a case of Septic Thrombosis in a pregnant woman, a multipara, aged 28 years, who shivered daily for a fortnight before her delivery. She had pain in her legs but was not medically attended before or after delivery. The day after delivery there was an inflammatory swelling at the back of the left thigh which on being opened later proved to be an abscess. On the fourth day of lying-in there was a supposed dislocation of the wrist, but this also proved to be an abscess. The pus was let out. The joint was ultimately disorganised. There was a large discharge of pus in the urine on the fourteenth day and hæmaturia till the end. Septic pneumonia occurred later and she died on the thirty-sixth day. There was no post-mortem examination. The speaker held the pyæmia to have resulted from septic thrombosis in the varicose veins of the leg.—Dr. Conner read notes of a case of Injury to the Hip in a man, aged 73 years, from a fall from a bicycle. The injury at first gave no signs of fracture or dislocation beyond the patient's inability to walk. Blood pigment appeared over the hip and the lower abdomen. He was in bed for a month. After that time he tried to walk but was unable to do so. Three months after the injury half an inch of shortening of the leg was noticed. Dr. Conner explained this shortening by the observation of the late Mr. Jones that blows on the hip might produce shortening by interfering with the blood-supply to the bone to such an extent that absorption of the femoral neck resulted.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on April 16th, Mr. E. C. Kingdon, the President, being in the chair.—Mr. R. Wood (Ilkeston) showed a case of Lupus Vulgaris which 10 years ago was treated with injections of Koch's tuberculin. The disease was arrested for a time but remained uncured.—Dr. W. E. Tresidder showed a case of Epithelioma of the Cervix Uteri which had been treated with the x rays, under which all signs of the disease had disappeared. A microscopic section of a portion of the growth taken before treatment was started confirmed the diagnosis.—The case was discussed by the President, Mr. A. R. Anderson, Dr. F. H. Jacob, and Dr. J. S. Bolton.—Mr. Anderson read a paper entitled,

"The Surgical Treatment of Gastric Ulcer." After some observations on the question of diagnosis Mr. Anderson confined his remarks to the treatment of (1) non-perforated ulcers and (2) hæmorrhage. Statistics were put forward showing the probable mortality from ulceration and hæmorrhage under medical treatment, and whilst advocating preliminary treatment by medical measures in all cases it was urged that earlier recourse should be had to surgical operation. In regard to the question of hæmorrhage the anatomy of the arterial supply of the stomach was first demonstrated and then the surgical measures for the arrest of bleeding were described.—The lateness of the hour precluded discussion of this valuable paper.

BIRKENHEAD MEDICAL SOCIETY.—The annual meeting of the above society was held on May 9th, Dr. J. Pinkerton, the President, being in the chair.—Mr. S. H. N. Harrington showed a patient with a Displacement of the Heart. The apex beat was in the seventh interspace, midway between the posterior axillary line and the spinal column. There was a complete absence of cardiac dulness in the front of the chest. There was no history of pleurisy or of overstrain to account for the displacement.—The President, Dr. J. Lambert, Mr. H. Laird Pearson, Dr. J. H. Dixon, and Dr. E. H. Brien commented upon the case.—The President showed the following specimens: 1. A small Calculus removed from a child, aged five years, during the operation of circumcision. The calculus was lodged between the prepuce and the glans penis. 2. The Stomach of an infant, aged six weeks, the pyloric orifice of which was so much contracted and thickened that a probe could only be passed through it by exercising considerable pressure. During life the child had vomited almost all food.—Dr. White showed a specimen of Imperfect Closure of the Foramen Ovale.—The Secretary showed a similar specimen.—The following officers and members of committee were elected for the ensuing year:—President: Mr. Pearson. Vice-president: Dr. Brien. Librarian: Mr. S. Wilkinson. Treasurer: Dr. W. H. Floyd. Secretary: Mr. J. H. Fardon. Committee: Dr. W. R. Dalzell, Mr. A. W. Pierce, Dr. R. O. Morris, Mr. W. Johnstone, and Dr. W. Leask.

BRITISH ELECTRO-THERAPEUTIC SOCIETY.—A special meeting of this society was held on May 2nd, Dr. W. S. Hedley, the President, being in the chair.—The motion to admit registered medical students as associates was negatived by the members present.—The ordinary meeting then followed.—The adjourned discussion on Dr. J. H. Sequeira's paper on the Finsen Treatment of Lupus, Rodent Ulcer, &c., was then opened by the President.—The following members took part in the discussion: Dr. H. Lewis Jones, Mr. J. F. Hall-Edwards, Dr. G. H. Graham, Dr. Horace Manders, Dr. F. Harrison Low, Mr. E. W. H. Shenton, Dr. H. McClure, and Mr. Chisholm Williams.—The general opinion of the speakers was strongly in favour of the Finsen and other allied forms of treatment for the conditions in question.—Dr. Sequeira replied.—It has been decided to hold the provincial meeting at Manchester on July 30th.

SOCIETY OF ANÆSTHETISTS.—A meeting of this society was held on May 2nd, Mr. Walter Tyrrell, the President, being in the chair.—Dr. Joseph Blumfeld read a communication entitled, "Some Points concerning Complete Relaxation of the Abdominal Muscles under Anæsthetics."—In the discussion that followed the President, Dr. H. Low, Dr. Dudley W. Buxton, and Dr. Harvey Hilliard took part.—Dr. G. B. Flux submitted a further communication on the Use and Structure of his Open Stopcock.—Dr. W. Millward showed a Modification of Clover's Inhaler designed for the purpose of administering ether or chloroform singly or together.

HEALTH OF EXETER.—Dr. J. Woodman, the medical officer of health of Exeter, reports that during 1901 the births numbered 1084, this being equal to 23·1 per 1000. The total number of deaths registered was 830, this being equal to a corrected death-rate of 16·4 per 1000. The infant mortality under one year was 152 per 1000 births. 533 cases of scarlet fever occurred during the year; 340 of these patients were removed to the sanatorium where four of them died; the remaining 193 were treated at their own homes and six died. Two cases of small-pox, 41 cases of enteric fever, 40 cases of diphtheria, and three cases of puerperal fever were notified.

Reviews and Notices of Books.

The Principles of Pathological Histology. By HARVEY R. GAYLORD, M.D., Professor of Surgical Pathology in the University of Buffalo, attending Surgeon to the Erie County Hospital, Buffalo, N.Y.; and LUDWIG ASCHOFF, M.D., Professor and First Assistant in the Pathological Institute of the University of Göttingen. With an Introductory Note by WILLIAM H. WELCH, M.D., Professor of Pathology in the Medical School of the Johns Hopkins University, Baltimore, M.D. Illustrated with 81 Engravings in the Text and 40 full-page Plates. London: Henry Kimpton. 1902. Pp. 359. Price 5*s.* 6*d.*

THIS work is intended to supplement the regular courses in pathological histology and to lead the student to the application of such knowledge in practice. The arrangements now made in all medical schools for the preparation of all microscopical specimens of various morbid conditions enable every student to obtain for himself an excellent collection of this nature. This, however, is not sufficient; he must be able to interpret the appearance of actual objects seen through the microscope. A book to confer this ability must present the histology of the various diseases as faithfully as the microscope itself. This has been one of the chief aims of the authors of this volume. Evidently no effort or expense has been spared in illustrating it and a most excellent publication is the result. We are informed that special apparatus was devised for the optical and photo-micrographic work and the negatives thus secured have been reproduced by the heliotype process. The plates are some of the best that we have seen in a text-book of this nature. The tricolour photo-micrographs are particularly successful.

The book is divided into three parts. In Part I. are found the most trustworthy methods for preparing tissues for microscopical examination. It is so arranged as to be equally useful to the student and to the practitioner. This part of the work is not overcrowded with descriptions of numerous processes which have been from time to time introduced, but only those have been selected which are comparatively simple and which yield the best results.

Attention is called to the "simplicity" of the technique of the freezing microtome as contrasted with the "difficulties" of the paraffin or celloidin method. We cannot altogether agree with the authors in this respect. It is true that if such an excellent, although expensive, instrument as the "Becker freezing microtome" be employed the very best results may be obtained, but if the ordinary freezing microtome is used the student will find considerable difficulty in obtaining satisfactory sections from many morbid specimens, whereas with tissues embedded in paraffin or celloidin, although the time required for preparing the tissues is considerably longer, there will be a larger proportion of successful results.

The student will have no difficulty in following the directions given for staining the preparations. The description of the "special methods" will be found to be especially useful; these include the processes for staining sections of the central nervous system. Great advances have been made in this direction during recent years and the methods of Weigert and Mallory have proved of immense value in differentiating the tissue elements of the brain and the spinal cord.

Part II. includes the principal portion of the work and deals with the Pathological Histology of Organs.

The sections describing the morbid changes which may occur are arranged on a uniform plan. A brief definition is first given of the condition about to be described. Then directions are given as to how the tissues of the organ under

consideration may be most advantageously treated and prepared for examination both in fresh and hardened specimens, and then the microscopical changes are fully described.

It is by no means easy to give a written account of histological appearances, but in this work the authors express themselves in terms which are easy to comprehend and they are assisted by an excellent series of reproductions of photo-micrographs. These have been carefully selected and the student will find the acquisition of a knowledge of morbid anatomy much facilitated by comparing these plates and the description that accompanies them with the specimens which he has himself prepared in the laboratories. We strongly disapprove of the substitution of plates and diagrams for actual specimens but a comprehension of what is seen through the microscope is much aided by reference to good illustrations, and in the work now before us both the letterpress and the engravings are all that can be desired. The above remarks are especially applicable to those organs of the body of which it is difficult to procure good microscopical specimens. For instance, sections of the digestive tract are not easily prepared; but the photographs reproduced on Plates XVI. and XVII. show admirably the microscopical changes associated with tuberculous ulcers in the intestine, "typhoid swelling of the intestine," aphthæ of the œsophagus, colitis cystica, and dysentery. The sections of bone, too, are instructive; they include rachitic rib, syphilis of the femur, and the normal ossification of a rib. The coloured plates are also beautifully reproduced. The colours in some instances appear rather too vivid but this is by no means a serious fault.

Part III. of the book contains a simple exposition of the optical problems with which the student should be familiar, and also some technical directions for those who wish to make attempts at photo-micrography.

The Foraminifera: an Introduction to the Study of the Protozoa. By FREDERICK CHAPMAN, A.L.S., F.R.M.S. London: Longmans, Green, and Co. 1902. Pp. 354, with 14 Plates and 42 Illustrations in the text. Price 9s. net.

THE title of Mr. Chapman's book is quite accurate but the sub-title which he has selected is by no means so. The book is not at all an "Introduction to the Study of the Protozoa," except, indeed, on the principle that in studying a particular group a beginning must be made somewhere. No general protozoan problems are discussed or even mentioned and the structure of the unicellular organisms, as a whole, is barely treated. By an "introduction" we are led to expect something more than eight pages which naturally deal with the protozoa as a whole in the briefest fashion. Considered as a manual of the foraminifera there is much to be said in favour of Mr. Chapman's volume and also something on the other side. It is chiefly with the illustrations that we find fault; they are numerous, it is true, but mostly coarse in execution. It would have been better if the numbers had been reduced and the excellence of those selected had been assured. We distinctly prefer few and well-executed drawings to the rude plenty with which this volume is provided.

As regards the book itself, the letterpress that is, Mr. Chapman is entitled to commendation. In the first place, the volume is not in any proper sense of the word a compilation. The author is one who has mainly devoted his scientific work to the elucidation of the foraminifera and we think it a wholesome state of affairs when a student writes upon the objects of his own particular study; it means enthusiasm and, in consequence, good work. Though dependent largely upon his own first-hand knowledge of this group of protozoa, Mr. Chapman by no means ignores his fellow-workers and forerunners in this branch of inquiry. Nearly 20 pages of bibliography are occupied with an enumeration of the titles of works upon these creatures, arranged in a way which has its uses; the list is partly chronological and partly divided into such heads as "Technical Preparation," "Biology," and so forth. These shelled protozoa are favourite objects of study to the mere microscopist, to him who merely wishes to examine beautiful forms without special interest in their structure, life-history, and range in time and space. Occurring in great abundance and variety, in the most diverse situations, it is natural that they should thus have been selected as objects of microscopical interest. Mr. Chapman, however, in no way panders to this, the more ignoble, side of microscopy. He forces upon the reader who needs taking in hand in this way a mass of valuable information. For the serious student he provides mainly an admirable *résumé* of the structural characters of the several families, genera, and even, at times, species. The vastness of the numbers renders any attempt at completeness in the enumeration of species clearly out of the question in a handbook of limited extent and large—perhaps rather too large—type. A judicious handling of "minion" might have allowed the author to be a little more comprehensive. However, we do not quarrel with him for any serious omissions. The matter treated seems to us to embrace all that there is to be said of importance respecting these foraminifera. They furnish many and very varied problems for our consideration, with some of which the author duly deals. The celebrated voyage of H.M.S. *Challenger*, concerning which Mr. Chapman often finds himself compelled to remark, and previous deep-sea exploring voyages, had led some naturalists to the idea that the "globigerina ooze" now falling in an impalpable rain on to the ocean bottom through tracts of thousands of miles was exactly comparable to the chalk of Dover and of Gris Nez. The obvious conclusion was therefore that the chalk, instead of being a deposit in shallow water, was in fact a deep-sea deposit. This clearly led to a reconsideration of a view which has oscillated greatly in the last few years. If an abyssal deposit of a previous period of the earth's history now forms a part of the solid ground upon which we walk it is plain that no belief can be held in the "permanence of the great oceans." Continents now divided by miles of water thousands of fathoms in depth might have been united in the closest embrace. It is true that the forms of foraminifera found in globigerina ooze on the one hand and in cretaceous chalk on the other are often identical, and that imbedded in this foraminiferal mass are the remains of such creatures as sea urchins which also present a great similarity in the two cases. But one fatal objection is the presence in the chalk and the absence from true deep-sea ooze of organisms which are in all probability creatures limited in their range to shallow waters and which are unfitted, or at least are not known, to live in abyssal deposits of more than 500 fathoms, a line at which some persons draw the distinction between deep-sea and shallow-water faunas. This particular subject, however, is not treated by the author, which disappointed us, as we should have liked to read some account of the newest arguments on this problem.

Another remarkable fact about these animals, but characteristic also of some other groups, is the long persistence of individual species. Mr. Chapman points out that globigerina bulloides "is found in every sea, and certain deep-sea deposits are often chiefly composed of the shells of this type-form." Furthermore, "undoubted examples are recorded from strata of lower cretaceous age, and it is well distributed throughout almost all tertiary deposits up to the present time." This is a most striking fact; as an instance of dogged conservatism it is unparalleled in the animal world. When we add to this that according to the table given by Mr. Chapman (on page 277) there is no family of the order

which has become extinct in the long course of time from the Cambrian (when these organisms first appear) up to the moment at which we are writing these lines the wonder becomes intensified. Of these organisms it may be written with literal truth, "Age could not wither ..... their infinite variety." In most groups of animals the past was richer than is the present. The mammal, the reptile, and the fish are all withered and shrunken by the passing of time, but not the foraminifera, which, in spite of their fragile bodies, are, like Rome, built for eternity. In the case of most animals which the naturalist requires for study the proverb, "First catch your hare" is of meaning. The foraminifera, however, lie ready to hand and it is only the "cooking" which presents difficulties, much smoothed by Mr. Chapman's final chapter on Collecting and Preparing. Seeing that according to Plancus (not he who flourished in Horace's younger days! but more correctly to be called Giovanni Bianchi) an ounce of sand from the Adriatic contains no less than 6000 of these minute creatures, the bag of the collector is not likely to be often empty. At any rate it will not be after reading Mr. Chapman's explanatory pages. It would appear from what the author tells us that these organisms were first noted by the geographer and historian Strabo. His attention was called to the very obvious nummulites of the Egyptian limestones. The first correct notion, however, of the place of these animals in the system is due to Dujardin who demonstrated so recently as in 1835 that they are to be looked upon as protozoa and not as diminutive cephalopoda, a view urged by his predecessors. From that period to the present many illustrious names in zoology appear in connexion with these microscopical animalcules, and Mr. Chapman has put the finishing touch to this gradually growing edifice by presenting us with a plain *résumé* of what is known concerning these small shell-bearing protozoa.

The Treatment of Neurasthenia. By A. PROUST and GILBERT BALLET. Translated by PETER CAMPBELL SMITH, L.R.C.P. & S. Edin. London: Henry Kimpton. 1902. Pp. 213. Price 5*s*.

THIS little book is a really excellent translation of a work by Professor A. Proust and Professor Gilbert Ballet, both of the Faculty of Medicine in Paris and both observers of the very greatest experience in the special department of neurology which is comprised in the title of the book. Neurasthenia is regarded by the authors as a disturbance of the highests and most differentiated functions and a disease which is essentially due to an irritable weakness of the nervous elements. The fundamental symptoms of the affection are persistent headache, insomnia, muscular asthenia, rachialgia, a peculiar mental state, and lastly, dyspepsia due to gastro-intestinal atony. The view that certain visceral derangements, genito-urinary troubles, and anæmia are the primary and fundamental causes of the nervous exhaustion is dismissed as contradictory to the evidence of well-ascertained facts. Indeed, all the functional disturbances observed in neurasthenic patients may be interpreted as etiologically dependent on the primordial alteration of the essential nerve elements, although the exact nature of this pathological alteration is unknown. Among the most important of the exciting causes must be included the cares and troubles of business, reverses in fortune, and the constant wear and tear of living at high pressure. The exhaustion of the lower nerve centres by muscular over-work, sexual excesses, and the toxic influence of alcohol, tobacco, morphia, cocaine, and other poisons, exercise a pernicious influence on the nerve elements, both in the case of the higher and of the lower nerve centres. All the causes above enumerated do not operate with the same frequency or with the same force in different individuals. The offspring of parents who have not been exposed to these exciting causes of neurasthenia will not, as a rule, show any marked susceptibility to similar exciting causes, unless exposed to them to an unusual degree. The accumulated sins or misfortunes of the parents are visited in varying degrees on the children in the form of hereditary predisposition or susceptibility to the diverse stimuli which engender neurasthenia. The more pronounced the hereditary predisposition the weaker the stimuli required to call the disease into being.

The treatment which is recommended in the pages of this little book is essentially common-sense in character and may be summed up in the following words: good moral and physical hygiene, a well-considered dietary, and encouragement by suggestion. Without altogether condemning treatment by medicine the authors believe that, on the whole, more harm than good has been done by drugs to the victims of neurasthenia, and therefore their advice is to rely solely on the principles of natural hygiene—advice with which we are inclined to agree.

LIBRARY TABLE.

The Standard Medical Directory of North America, 1902: including a Directory of Practising Physicians in the United States of America, Canada, Cuba, Mexico, and Central America. Chicago: G. P. Engelhard and Co. Pp. 800, large quarto.—We are inclined to agree with the statement of the editors in their preface that the publication of this first edition of their work (which is to be issued annually in the future) has been an "immense task." Although it is obviously difficult for us to express an opinion as to the degree of accuracy attained by the appointment of some 30,000 (!) correspondents to tabulate the lists of those included in the generic term "physicians," it is not difficult to concede that thoroughness has, at any rate, been aimed at, seeing that the total number of physicians tabulated in the directory is given at 122,937, which would work out at one correspondent for under every five names included in the list. (By the way, we may notice that the pagination of the volume jumps from 600 to 701, thus omitting 100 pages.) The contents of the directory include, in addition to its main object, much material information concerning the medical colleges, the medical services, and the medical societies; a digest of medical legislation, including the texts of the Medical Practice Acts of the various States; lists of the State boards of health and of the boards of medical examiners; a very lengthy recital of medical books and periodicals (of which latter there are over 250), and an equally lengthy list of hospitals and sanatoriums. An interesting table at the commencement of the work gives the population of the United States of America at 84,332,610 and the number of physicians at 115,222, equalling 13·666 physicians to each 10,000 of the population; whilst a like comparison for the Dominion of Canada works out at 9·725 physicians per 10,000. Mexico would appear to be the El Dorado of the medical man, so far, at any rate, as the ratio of the profession to the population is concerned—viz., 1·266 to 10,000. The ratio for Great Britain, based on the more or less incomplete 1901 census returns, is 7·2211 to 10,000, and that for Germany is stated to be 5 per 10,000. We not infrequently hear of the overcrowding of the profession in this country, but we appear to be considerably better off than our professional brothers in America. The "Standard Medical Directory" will doubtless prove a very useful work and is a distinct advance on anything we have yet seen claiming to cover similar ground.

The Road to Rome. By H. BELLOC. London: George Allen. 1902. Pp. 448. Price 7*s*. 6*d*.—This is a vagabond book of the best type—of the type, namely, to which belong

Waterton's "Wanderings," "Travels with a Donkey in the Cevennes," "The Golden Ass," and Samuel Butler's "Sanctuaries and Shrines of Northern Italy." We all love wandering, although most of us cannot afford the time wherein to wander. But the next best thing to wandering oneself is to read an account of a journey by a wanderer who can write in the manner of Mr. Belloc. Take the passage about the author's first view of the distant Alps: "Up there in the sky, to which only clouds belong and birds, and the last trembling colours of pure light, they stood fast and hard; not moving as do things of the sky. They were distant as the little clouds of summer, as fine and tenuous; but in their reflection and in their quality as it were of weapons (like spears and shields of an unknown array) they occupied the sky with a sublime invasion: and the things proper to the sky were forgotten by me in their presence as I gazed. To what emotion shall I compare this astonishment? So in first love one finds that *this* can belong to *me*." The Alps are indeed an exceeding great army but yet we think that the solemnity of a solitary mountain like Ararat is even more awe-inspiring. Anyone who has seen those twin peaks rising from the desolate plain will know the sensation to which we refer. The book is full of charming little sketches and we can recommend it as most restful reading to any hard-worked man. Not that we mean by this that on reading it he will feel an "exposition of sleep" but that it will take him out of his worries.

Bird Hunting on the White Nile. By HARRY F. WITHERBY. London: *Knowledge* Office. 1902. Pp. 117. Price 2*s.* 6*d.*—This little book is a record of a trip made through the Sudan for the purpose of collecting birds. The Sudanese birds are by no means well known to English ornithologists and many of them are exceedingly rare. Mr. Witherby, of course, collected with care and discrimination but it is to be hoped that with the opening up of the country the same fate will not overtake the more remarkable birds of the Sudan as has overtaken the bustard and the hoopoe in England. Already the fauna of South Africa is greatly reduced, witness the complete disappearance of the square-mouthed white rhinoceros. Let us hope that measures will be taken to prevent useless slaughter of the avi-fauna of the Sudan.

Savage Island. By BASIL THOMSON. London: John Murray. 1902. Pp. 234. Price 7*s.* 6*d.*—Savage Island, otherwise Niue, lies about 1000 miles N.N.E. of New Zealand. Mr. Thomson went there to proclaim a protectorate at the request of the king of the island. The request was made 13 years previously, but the British Government never does things in a hurry. Mr. Thomson's book is decidedly interesting besides being amusingly written, but it gives the reader occasion to think whether the introduction of Europeans and of European ways has really benefited the natives of Polynesia. True, it has done away with cannibalism and with customs and institutions such as the Areoi but, on the other hand, the introduction of syphilis, measles, and bad whisky is a heavy sum on the debtor side of the account.

A Treatise on Pharmacy for Students and Pharmacists. By CHARLES CASPARI, jun., Ph.G., Professor of Pharmacy in the Maryland College of Pharmacy. Second edition, revised and enlarged. London: Henry Kimpton. 1902. 776 pages, illustrated with 301 woodcuts and a portrait plate. Price 19*s.* net.—As implied by the title, this work is intended chiefly for pharmacists and serves as a text-book for the student and as a handbook for the practising pharmacist. The subjects treated in the book have been grouped under three distinct headings. Part I. comprises General Pharmacy, including the study of weights and measures, specific gravity, the application and control of heat, mechanical subdivision of drugs, and methods of solution and separation, together with a classification and description of the various solvents and products of plants used in pharmacy. This part is mainly of interest to pharmacists and appeals but little to the medical practitioner or student, but those for whom it is especially useful will find no better guide to the details of these pharmaceutical operations.

Part II. treats of Practical Galenical Pharmacy and Dispensing. The subject is divided into chapters dealing severally with the various classes of galenical preparations—e.g., liquors, tinctures, extracts, ointments, and so forth. The modes of making the various modern forms of medication are described—e.g., hypodermic and other tablets, capsules, dermatological pastes, glycero-gelatins, and dermal pencils, but one notable exception may be mentioned, viz., ophthalmic eye discs, which do not appear to be even mentioned. Parts I. and II. are profusely illustrated with excellent woodcuts of apparatus suitable for use both on the small scale and for manufacturing purposes. Part II. is likely to prove of more service to the physician than is Part I. It contains many suggestions of a useful character. Thus, in the case of ointments it is pointed out that glycerin should not be used in place of oil or water to produce a smooth paste with vegetable or mineral powders owing to its tendency to separate from the fats on standing. The presence of a large quantity of glycerin in an ointment is sometimes necessary for therapeutic purposes; in such cases the substitution of a small quantity of anhydrous wool-fat for a portion of the fatty basis removes the difficulty. The occurrence in almost every paragraph of practical notes of this character shows that this part is of great service to the pharmacist.

Part III. is devoted to Pharmaceutical Chemistry and is confined to such compounds as are either officially recognised in the United States Pharmacopœia or are of special medicinal interest. This part is intended to serve as an aid to the study and use of that Pharmacopœia by the inclusion of explanatory notes on the tests and methods of assay. The intention is well realised. The inorganic substances are dealt with first and much acceptable condensation is effected by a judicious grouping of them. Thus, the halogens are considered in one chapter while other chapters are devoted to the compounds of sodium, of potassium, of lithium, and so on. This method of grouping together the various preparations of a given element is more convenient for the prescriber than an alphabetical arrangement, such as is generally met with in pharmacopœias. Here, again, we find abundant evidence of laboratory work and of considerable practical experience. Thus, under "Potassium citrate" we read that the solution should be extemporaneously prepared as it does not keep well and soon loses its refreshing taste. Under the articles on the various well-known organic substances the useful method has been adopted of pointing out their disadvantages, when such are known, and thus of explaining the particular advantages derived from the introduction of the various substitution products. Thus, under "Pyrogallol" it is stated that the poisonous nature of this compound has led to the introduction of the derivative product gallacetophenone. The work is provided with a valuable index and is well printed in bold type. It can be recommended to every pharmacist as a daily companion with confidence and to the physician interested in pharmacy it may be commended as a work of reference.

DIRECTORIES.—*The City of London Directory, 1902* (W. H. and L. Collingridge, Aldersgate-street, E.C., pp. 1222, price not stated), deals exhaustively with the liveries, public officials, and the vast commercial enterprises carried on within the city limits, and is an invaluable book of reference in all matters pertaining to the great centre of business life.—*Sell's Dictionary of the World's Press* (Henry Sell, 167, Fleet-street, E.C., pp. 980, price 7*s.* 6*d.*) and the

Advertiser's A B C (T. B. Browne, 163, Queen Victoria-street, E.C., pp. 1090, price 10*s.* 6*d.*) run on very similar lines and contain much useful information concerning the ever-increasing number of publications issuing from the press in this and other countries.

JOURNALS AND MAGAZINES.

The *Practitioner* for May contains two long and carefully compiled original articles. The first, by Dr. R. W. Philip, deals chiefly with a detailed investigation of the temperature in pulmonary tuberculosis and serves well to show how important in some cases a frequent use of the thermometer may be. Dr. Philip also gives cases showing how the temperature may remain normal in the presence of other signs suggestive of disease in an active state. The second article is by Dr. R. T. Williamson on Acute Anterior Poliomyelitis and teems with references to an almost bewildering extent. Dr. Williamson favours a toxin theory of etiology for the disease. Mr. William Rose describes a successful case of Removal of the Gasserian Ganglion by Doyen's Method. The editorial remarks evince chiefly annoyance at Mr. Rhodes's will.

New Inventions.

A NEW ASEPTIC VACCINATOR.

As the Local Government Board inspectors invariably find fault with the point of the popular Cooper-Rose vaccinating instrument, on account of it not being readily cleansed, and as there is nothing better on the market, I have asked Messrs. Arnold and Sons of West Smithfield, London, E.C., to carry out my idea of one that would remedy that defect, and this they have done most satisfactorily. My vaccinating instrument shown in the illustrations is of the usual pencil

shape. One end contains the spatula and the other on being pulled out and reversed reveals a small case perforated with five small holes at the end, through which five ordinary tailors needles can be inserted from the inside of the case, projecting externally two-sixteenths of an inch and kept in their position by a cap which screws on and off, thus allowing the needles to be renewed at any time, while also exposing sufficient of the points to allow effectual sterilising by the flame of a spirit lamp. The needles being renewed from time to time do their work most effectually and so gently that children hardly feel the operation, thus avoiding the heavier and painful pressure that is required when immoveable needles become blunted. It is a great advantage to have the needles so easily removeable, for the size of the scarifications can be accurately regulated by using only two or three needles and they should be made as recommended by Dr. C. Renner and not by twirling as when using the Cooper-Rose instrument. Being made wholly of metal all or any part of it can be perfectly sterilised by boiling in an ordinary test-tube. Refill needles are contained inside the instrument which pulls apart in the centre. To arrange new needles in their place the small case is held up to the light and with a pair of forceps they are easily put into the holes; when they are properly placed screw on the cap and fix it on the end of the instrument. This vaccinator has received the approval of the Local Government Board and I invariably find that the use of it removes one of the great objections that mothers have to vaccination, the ordinary lancet usually being a perfect terror to them.

JOHN WILSON, M.D. Edin.,
Public Vaccinator, No. 4 District, Cheltenham.

A NEW CLAMP FOR ABDOMINAL OPERATIONS.

THIS clamp has for its primary object the controlling of hæmorrhage while a wedge-shaped piece of liver is being excised. The idea and the instrument are both novel—the outcome of practical experience—for hitherto the liver has been compressed by the assistant's fingers. Since both hands are necessarily occupied, an instrument which will free the assistant so as to be of use otherwise, and which is so made as to fulfil its purpose without damage to the liver, should be of advantage. The clamp is 11 inches long with a strong rachet catch and a locked joint; it is made of nickel-plated steel. Each blade consists of two slender prongs over which a wide piece of thin rubber tubing is stretched in the manner shown in the illustration; this makes each blade

three-quarters of an inch wide and so a broad smooth surface is applied to the liver which will not slip. Bearing in mind the thinner anterior border of the liver the blades have been so adjusted as to compress equally the area of liver which is to be removed. The clamp can also be used in gastrectomy, pylorectomy, or enterectomy, when it might be advantageous to have the blades a little narrower. In any case it is argued that hæmorrhage will be efficiently controlled and that no injury to the compressed tissue will ensue. The clamp may be obtained from Messrs. Reynolds and Branson, Limited, 13, Briggate, Leeds.

BERTRAM C. STEVENS, M.D., M.S. Durh.,
Swinton, Rotherham. F.R.C.S. Edin.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.—The next general meeting of this association will be held at 11, Chandos-street, Cavendish-square, London, W., on May 21st, at 4 P.M., under the presidency of Dr. Oscar T. Woods. Dr. Henry Rayner will open a discussion on Sleep in Relation to Narcotics in the Treatment of Mental Diseases. Dr. T. Claye Shaw will read a paper on the Surgical Treatment of Delusional Insanity Based upon its Physiological Study, and Dr. Robert Jones will read Notes on the Treatment of Morphinomania. It is expected that the following gentlemen will take part in the discussion: Dr. Fletcher Beach, Dr. G. F. Blandford, Dr. Harry Campbell, Dr. T. B. Hyslop, Dr. C. A. Mercier, Dr. G. H. Savage, Dr. T. Claye Shaw, Dr. R. Percy Smith, and Dr. T. Outterson Wood. Members will dine together after the meeting at the Café Royal, Regent-street, W., at 7 P.M.

THE LANCET.

LONDON: SATURDAY, MAY 17, 1902.

The Royal Army Medical Corps.

WE published in our issue of May 10th, p. 1339, the text of the new regulations for admission to the Royal Army Medical Corps which were promulgated in the monthly issue of Army Orders for May, 1902. These regulations furnish information upon a number of details which has been rendered necessary by the issue of the Royal Warrant of March last: indeed, they may be regarded as complementary of that document. The qualifications of candidates for commissions, the nature of the appointments, the subjects for entrance examinations and for promotion are all set forth, together with extracts from the recent Royal Warrant with regard to pay and advancement. We cannot spare those of our readers who are nearly interested in the matter the trouble of going through the regulations word by word, for they require to be carefully studied in order to be properly understood. The impression derived from any superficial or cursory reading of them might be that they set forth a scheme which was of too elaborate and complicated a kind, but this was probably unavoidable in the circumstances. Medical students and those of our profession who may be turning their attention to the army as offering a promising and suitable field for their future career like to have the gist of things packed in a small compass and to have the nature and terms of any proposed new undertaking stated in a very plain and simple fashion, so that the appearance of intricacy is to be regretted. We venture to think that the authorities would have better attained the end that they have in view by adhering to some such method of army medical reform as was long ago outlined in THE LANCET. But we may be a little biased in favour of our own scheme, and it must be remembered that new official regulations have to be exhaustive, for they must provide against contingencies that seem remote only until experience brings them close. With a little knowledge of the past history and present condition of the Army Medical Service and a little careful study it is easy to unravel the meaning of the regulations and to discover the aim and intention of the authorities in drafting them.

Looking at the new regulations for admission to the Royal Army Medical Corps as a whole, we may assume that the question of the military titles, rank, and status of army medical officers had been already settled in accordance with the wishes of the Army Medical Service and the profession generally, so that there remained for solution the problems as to how medical officers of a high professional standard could be obtained in sufficient numbers for the requirements of the service and as to how the State could have the assurance that that standard would be maintained. The official answer to those questions on the part of the War Office, as we read the matter, is to be found in the new regulations studied in connexion with the Royal Warrant It will be seen that, according to the new regulations, it is proposed to maintain the efficiency of the whole medical service by increasing the facilities for professional and scientific study and by the institution of a new system of examination with the view of testing the practical qualifications of the individual members of it. These examinations are divided into two classes: one of a purely professional and scientific character; the other having relation more particularly to the duties of military service which military medical officers as such are called upon to perform. Considered in the abstract, there may be little or nothing to be urged against the examination system. But we confess that we have not the same opinion of examinations as a test of fitness and merit that the authorities seem to entertain, and we fear that a multiplicity of tests will have a somewhat deterrent effect on young men who have just qualified for the practice of their profession and who had hoped thereby to have emancipated themselves from further stringent professional examinations. The competitive entrance examination is no longer of a theoretical and academic kind—a mere repetition of the tests that the candidate has already undergone—but it is of a really practical and clinical character and adapted to test the knowledge of a man who is already qualified. This has to be supplemented by the results of a further examination after a course of special instruction in hygiene, in bacteriology, and in the technical duties of the corps—a two months' course of instruction in hygiene seems, by the way, too short, considering the enormous value that a practical knowledge of sanitary science will be to the officers of the Royal Army Medical Corps. The new regulations for promotion to the rank of major are very important, because the medical officer's future will greatly depend upon the result of the examination he will have to undergo at that stage of his service career. If the intentions and provisions of the regulations are properly carried out medical officers will, as it appears to us, have excellent opportunities of preparing themselves for this examination, with the design and object of which we quite approve. We assume that as a matter of course there will be established some sort of medical staff college and that it will be in London where medical officers will be surrounded with opportunities of seeing hospital practice of all kinds and of obtaining any clinical instruction which they may desire.

The new scheme unquestionably provides for a fairly liberal increase of pay; the door to professional merit and attainments is now also thrown open in a way which has not hitherto been the case in the army medical service. It goes without saying that these are excellent points. A medical officer of the future will to a large extent be master of his fate. Special opportunities will be afforded him for study and he can accelerate his promotion by success at examinations and can qualify for an appointment with extra pay as an expert in subjects for which he has any special knowledge, taste, and aptitude. There are other points on most of which we have touched in previous articles but to which it may be necessary to

recur. Their importance is not as yet as obvious as those which we have selected for notice. We may conclude by saying that, taken as a whole, the Royal Warrant and the new regulations for admission into the Royal Army Medical Corps constitute, in our opinion, a distinct advance on anything which has yet been done to make the Army Medical Service what it should be—viz., a scientific branch of the military service.

The Public Vaccinator's Relations to the Public and to the Profession.

EVEN as war is the opportunity for distinction or failure on the part of the soldier, so, in a certain sense if in a different degree, is small-pox the public vaccinator's opportunity. The country expects each to do his duty and it is only after the storm has passed that the bearing and action of the officer are seen in their proper proportions. With the public vaccinator there is but little scope for what in a martial sense passes for heroism, but the gauntlet which he has to run will win for him either the esteem or distrust of the public body which he serves and the appreciation or the reverse of his medical colleagues. There can, we think, be no doubt that during the stress of the small-pox epidemic the public vaccinators have, as a body, proved themselves not only public servants worthy of the highest trust but also courteous colleagues. This would, we know, be the testimony of the local authorities intrusted with the administration of the Vaccination Acts, as also that of the medical practitioners who have had to perform vaccination in somewhat trying circumstances in consequence of the extensive duties which the present Act imposes upon public vaccinators.

But at times there have unfortunately been indications that in his relations with the local administrative authority the public vaccinator, although he has kept within the letter of the law, has nevertheless pressed home somewhat unduly his claims upon the public purse. Questions such as these do not lend themselves well to discussion, and decisions in regard to them must be arrived at on a basis of good judgment and taste. Many of the narratives which have reached our ears we are unwilling and unable to credit. We are unwilling, for instance, to believe that a public vaccinator would revaccinate his wife at the public expense in his drawing-room when by passing into the surgery the operation could have been performed at a materially smaller expenditure to the ratepayer. But this serves to raise the rather delicate question as to how far a public vaccinator is well advised in vaccinating his wife and family in his official capacity. There is obviously no statutory objection against his so doing, but at the same time we cannot refrain from expressing the opinion that the public vaccinator would be consulting the best interests of the profession to which he belongs by abstaining from entering a fee in his register next to the names of intimate relations living under the same roof with himself. If he prefers the Local Government Board lymph it would be open to him to use it upon such patients, but while entering their names in his register in accordance with his instructions he should omit, as a matter of courtesy to the public, to fill in the columns relative to his fees. Public vaccinators who do not take this view of the situation should bear in mind that any action which is likely to be regarded as somewhat exacting by the guardians and the public is calculated in the long run to exert a prejudicial effect upon public vaccinators as a whole. It is well that the public vaccinator should remember that he is now paid a fee which, if it be not altogether adequate to the work performed, is nevertheless almost as much as he would feel justified in charging in a private capacity. It is this fact which should, we think, prompt the public vaccinator to meet any proposals for revaccination in an adaptable spirit. And above all, the public vaccinator should not, if he can possibly prevent it, afford ground for the suspicion that in cases of revaccination the operation is performed at the residence of the patient rather than at the surgery with the view of securing the higher fee. It may be that already the very substantial sums which are being paid to public vaccinators for revaccinations performed elsewhere than at the surgery will lead in the future to the maximum fee being allowed in connexion *only* with the first case, in houses where multiple revaccinations are performed.

So much with regard to the attitude of the public vaccinator towards the guardians and the public; a word now in reference to his attitude towards his medical colleagues. It would be affectation to assume that the working of the present Vaccination Act has been altogether without unpleasantness in certain directions. If the feeling were traced to its source there would be found faults, or rather perhaps an absence of courteous tact, on both sides. The public vaccinator has doubtless been given enormous powers and facilities and it is for this very reason that he should exercise the greatest forbearance towards his less fortunate colleagues. Unless he does so a decisive reaction possibly awaits him. He may, indeed, find that the distinction which he now enjoys may be taken from him by a stroke of the legislative pen by the simple expedient of creating all medical practitioners public vaccinators with claims upon the public purse. We are fully aware that the public vaccinator has statutory duties that he must perform and the execution of which is sometimes difficult and often very unpleasant. He can, however, effect much in a negative sense; he can refrain from publishing the fact that he alone is entitled to use the Government lymph, or if he must speak highly of the material that he is about to use he should allow in the same breath that his lymph is no better or worse than many other strains on the market. He may, too, refrain from any persuasive action as regards vaccination in the case of children whose names have not yet been placed upon the "H." Form, and of children whom he has not been specifically invited to vaccinate; and finally, he will do well to refrain from persuading those who are in a position to pay for private vaccination that they can be vaccinated equally well by him at the public expense. There is, however, one exception to this negative action, and that is in instances where the public vaccinator, at the request of the medical officer of health, visits a house where small-pox has actually occurred. In this case it is his public duty to urge immediate revaccination upon all the inmates of the house. With the exercise of mutual forbearance there should be

practically no friction in the detailed administration of the Act, and seeing that the Act has resulted in an enormous increase of vaccination in the country it is the duty of all concerned to aid in promoting its smooth application.

The Case of Mrs. Cathcart.

AFTER a prolonged inquiry and a very exhaustive medical exposition of her mental condition Mrs. CATHCART has been found by a special jury to be insane and incapable of managing her affairs. Of the correctness of this decision there will be a general endorsement, and it may be taken for granted that whilst her property will in the future be carefully protected and administered she will herself be allowed a measure of comfort and ease in which any element of restraint will be merely nominal.

Some years ago Mrs. CATHCART was the subject of a judicial inquiry as to the state of her mind and her capacity for looking after her affairs but, owing mainly to the powerful advocacy of Sir CHARLES RUSSELL (as he then was), she obtained from the jury a verdict in her favour. Experience has shown that Mrs. CATHCART was not able to carry out the hopes of her friends in the way that they expected. She has been constantly engaged in litigation of a costly and useless character and finally she was placed in Holloway Prison for contempt of court, where her conduct was carefully watched and noted for several months by the medical officers and the warders. Mrs. CATHCART has for some years suffered from delusional insanity and it seems most probable that she has become worse and that the scope of her delusions and hallucinations has extended to a degree that makes hope of recovery more than doubtful. For her own sake it is to be regretted that she did obtain the verdict in the first trial, as she would otherwise have been saved experiences that must have filled her life with discomfort and worry. At the same time she has had her opportunity and has failed to justify it and the opinions of the medical experts who gave evidence which was not in her favour at the first trial have been amply borne out by the subsequent events. Some criticism has been passed upon the length of time during which Mrs. CATHCART has been detained as a prisoner, but it must be remembered that she had been declared by a jury to be "sane" and therefore she was liable—whatever may have been the general opinion as to the verdict—to all the consequences of responsibility until it was proved that she was not answerable for her actions. A lengthy detention in the presence of her refusal to "purge her contempt" by means which were readily available was unavoidable, because it appears that the prominent symptoms of alienation were of a recurrent character and that there were times when little could be detected beyond mere eccentricity. Whilst it may seem that her detention as a prisoner, who was all along suspected of being insane, was unnecessarily long it must be remembered that it is only by a prolonged and carefully recorded examination extending over a considerable time that some of these cases of delusional insanity can be clinically elucidated. If Mrs. CATHCART was not insane she was rightly detained until she had expiated her offence; if, however, she was insane it became necessary to establish the proofs in the most complete manner so as not to incur a repetition of what we must call an unfortunate acquittal. There is every evidence that, conformably with the rules, she was treated in the most considerate way in the prison.

The opinion appears to have gained ground that it might be possible for Mrs. CATHCART to manage herself while not managing her estate, and that therefore justice would have been satisfied by placing her estate under the management of a committee whilst allowing personal liberty to herself. We do not agree with this hypothesis. Personality and the objective relations necessarily entailed in the management of property are so fused that it is difficult to see how a person can be mentally unsound as regards the latter and sound as regards the former. In our opinion the protection of the court which is accorded to the estate is most properly, in this instance, made to include the person. Whatever Mrs. CATHCART has had to endure during the last few months through litigation and enforced incarceration she owes to the powerful effects of advocacy. The medical evidence given on the side of the Crown at the first inquiry has been fully justified by the conduct of the lady during her subsequent career, and any doubts which may have existed in the minds of her sympathisers must now be completely and finally set at rest.

Annotations.

"Ne quid nimis."

THE VOLCANIC DISASTER IN THE WEST INDIES.

A GREATER and more awful disaster than that which has befallen the town of St. Pierre in the island of Martinique can scarcely be imagined. It looms larger than did the great historic eruption of Vesuvius and the destruction of Pompeii, of which Dion Cassius wrote (lib. lxvi.), according to the quotation selected by Lord Lytton on the title-page of "The Last Days of Pompeii," as follows: "Such is Vesuvius, and these things take place in it every year. But all eruptions which have happened since would be trifling, even if all summed into one, compared to what occurred at the period we refer to. ..... Day was turned into night and light into darkness, an inexpressible quantity of dust and ashes was poured out, deluging land, sea, and air and burying two entire cities, Herculaneum and Pompeii, while the people were sitting in the theatre." Seismic history in this instance has only too fearfully and faithfully repeated itself, and it is doubtful whether the volcanic outburst at St. Pierre was less in intensity or involved a lesser area of destruction than that of Vesuvius over 18 centuries ago when it completely blotted out the city of Pompeii. St. Pierre, too, is no more and the disaster is complete. It is estimated that no less than 30,000 people were destroyed and it does not seem possible that this immense sacrifice of life could have been prevented. It is reported, however, that the Pelée mountain had exhibited signs of disturbance since April 23rd. But the mere smoking of a volcanic mountain may mean nothing and so no alarm was entertained. So long as the earth contains molten elements within its crust so long must volcanic eruption be possible. It matters little what the exact nature of these immense explosions is—a consideration of the great potentialities of the earth, sea, and air will readily yield an infinity of explanations as to their occurrence. The intense violence of a volcanic outburst probably has its origin in the sudden evolution of steam by water from the sea or rivers gaining access to intensely hot subterranean fires. With slight explosion the result may be an earthquake

with perhaps no evidence of volcanic eruption at all. All depends upon the resistance which the earth's crust is able to offer. There are lines of weaknesses in various parts of the earth and these lines correspond with volcanic districts and regions where earthquakes and earth tremors are in evidence. The true earthquake makes itself felt all over the world, whereas the volcanic disturbance does not, because the force in the latter instance has found vent. Professor Milne in the Isle of Wight is thus able by means of his delicate seismological instruments to detect earth tremors occurring at any part of the earth. The terrible disaster at St. Pierre and St. Vincent has cast a painful gloom over the whole civilised world and intense sympathy has been universally expressed. It is, however, some consolation to reflect that the wholesale destruction of human life by rivers of molten lava deluging a town or by the incessant hail of hot sulphurous cinders filling the air does not necessarily imply an agonising death. On the contrary, it is probable that, in some instances at any rate, there is no struggle—the vapours of lava would quickly overpower and render the victims senseless and in this state they would probably be overcome by asphyxiation and die. There would appear, again, to be some evidence that phenomena similar to those of lightning accompany volcanic explosions. Such is reported to be the case at Martinique and Lord Lytton, in a note in "The Last Days of Pompeii," says: "The volcanic lightnings introduced in my description were evidently among the engines of ruin at Pompeii." It is not definitely established, we believe, that an electrical disturbance is necessarily associated with volcanic eruptions, but from some accounts of the Martinique disaster it would appear that many bodies presented the appearance of having been struck by lightning. The mystic forces of the earth's interior can indeed work immense destruction to life and property and yet strange is it to reflect that human life would cease to be possible on the earth's surface were these subterranean fires to be extinguished. Volcanic disturbances are an indication of the earth's vitality and when these cease the earth will be as uninhabitable and just such a cinder as is the moon. The complete sympathy of the whole human race has declared itself and it is devoutly to be hoped that this sympathy will assume a very practical shape, that speedy relief may be secured, and that that worst of all sequelæ, famine, may be averted. Human help can do no more in such a terrible disaster.

MEDICINE AND THE TEACHING OF THE GOSPEL.

THAT the medical branch of the Church Missionary Society has proved a powerful auxiliary to the parent society in its endeavour to spread the teachings of the Gospel is shown by the satisfactory report of the Medical Mission Auxiliary which was presented at a meeting presided over by the Bishop of Kensington at St. James's Hall on May 8th. During the year 1901 the number of medical men on the roll of the society has been increased to 68 and there are now a total of 1688 beds in the society's hospitals, as compared with 1613 in the previous year. The number of in-patients has increased from 11,890 to 14,470, and in the out-patient department more than 100,000 additional attendances were registered. However, it is not at all satisfactory to know that the medical work of the auxiliary is being seriously crippled in several important centres for want of suitable buildings, especially in Gaza, Ispahan, Kirman, Fuh-chow, and Kien-King. The Financial Committee earnestly appeals for gifts towards building new hospitals in these places. The total expenditure of the year under notice was £20,773, as against £17,962 in the previous year, and the balance-sheet shows a deficit of £5920. There can be no doubt that the secret of the success of the medical mission lies in the fact that medical men hold the key which can unlock the doors to hearts which would otherwise remain closed—the key of sympathy, as the Bishop of Kensington happily termed it. The great beauty of the medical mission, he added, was that the outcome of the highest human science and skill was consecrated to the service of Christ. Accounts of the work done at the various stations which the speakers represented were given respectively by Dr. E. F. Neve (Kashmir), Dr. A. R. Cook (Uganda), Dr. B. van Someren Taylor (Hing-Hwa), and Mr. H. White (Yezd).

MOSQUITOES AND MALARIA.

WE have received a copy of a lecture delivered at the Dalhousie Institute, Calcutta, on April 8th of this year by Dr. T. Frederick Pearse on Mosquitoes and Malaria. Many such lectures and addresses have, of course, been delivered during the past two years, but there is always room for a good, clear, popular exposition of the complicated pathological story implied by the title. And Dr. Pearse's paper was a good *résumé* of the results of the investigations which have been made as to the causal relationship of the mosquito to malaria, couched in the proper phraseology for a discourse not intended for an entirely medical audience. The information that he gave in regard to the natural history of the mosquito is exactly the data that the layman wants, for he cannot be expected to be much impressed by a theory which he cannot follow. The speaker described the development of the mosquito through the various stages of metamorphosis in an able and lucid manner, so that even those of his audience who knew nothing about entomology must have thoroughly understood all the facts which he brought forward. The differences between the genera culex and anopheles were carefully described and their habits and customs were duly drawn attention to. Dr. Pearse then proceeded to relate what he termed "one of the fairy tales of science"—namely, the nature of the parasites found in the blood in cases of malaria and the changes which they undergo when received into the mosquito's stomach after the insect has been feeding on the blood of an individual suffering from malaria. He showed further how the old observations on malaria might be explained on the mosquito theory and finally he indicated the precautions which persons living in malarious districts should adopt in order to avoid contracting the disease. He also suggested various methods for attacking the breeding grounds of the anopheles. Dr. Pearse was successful in condensing into the space of a lecture a large number of interesting facts concerning one of the most valuable of modern medical discoveries. We further draw attention to a contribution by Dr. Patrick Manson which we publish in another column, entitled, "The Diagnosis of Malaria from the Standpoint of the Practitioner in England." He points out that malaria is far too frequently assumed to be present in patients in this country when no such taint exists. He arranges the pathognomonic indications of malarial infection under three headings: (1) the clinical; (2) the therapeutic; and (3) the microscopical. Dr. Manson's remarks will well repay perusal. Practitioners in this country have but comparatively few opportunities of observing cases of malaria and hence are liable to fall into error. The clinical manifestations are discussed in an original and most instructive manner. Dr. Manson maintains that there is only one clinical symptom that justifies a positive diagnosis—this is periodicity. He further states that his experience has made him formulate a rule which he recommends to practitioners: "Have absolute confidence in tertian and quartan periodicity as a basis for a diagnosis of malarial infection, but distrust, or rather absolutely disregard, quotidian periodicity." The

therapeutic test is probably generally well known; the microscopical, as Dr. Manson admits, is of value only in the hands of the expert microscopist.

REPRINTS—SUGGESTIONS TO MEDICAL WRITERS.

DR. J. MADISON TAYLOR of Philadelphia, U.S.A., has contributed to the March number of the quarterly journal, *Medical Libraries*, published at Denver, Colorado, U.S.A., some hints for facilitating reference to medical papers and records. His suggestions in brief are:—

1. The size of sheet should be more uniform. 2. Authors should send duplicate copies of every paper to certain libraries, so that they may be filled under the heading of "Author" and under the heading of "Subject." 3. Reprints should be filed at the hospital from which clinical material has been obtained. 4. The notes of hospitals, so far as they are common property, by staff or writers should be marked in some clear way with the name or initials of the author, or reference should be made to the article.

Dr. Taylor's ideas, so far as they apply in this country, are worthy of consideration, but his suggestions are fulfilled by our own columns and those of the *British Medical Journal* in a way that he hardly realises, living in a country somewhat oppressed by the multiplicity of medical publications. It is common for us to publish a paper containing a *résumé* of all cases of a certain disease observed in a certain hospital between certain dates. Future observers by consulting our indices know where they should take up the tale. In the United States of America such summaries may be hidden in any of, say, 250 journals and to search for them is an arduous undertaking which hardly repays the necessary trouble.

MENTAL CONDITIONS RESULTING IN HOMICIDE.

THE difficulty of investigating homicidal conditions and of diagnosing homicidal tendencies in insane patients is great. In the *Journal of Mental Science* for April last Dr. G. T. Revington, resident physician for the Asylum for Criminal Lunatics at Dundrum, Ireland, discusses this important subject. The paper is based upon the study of 49 male patients who were admitted to the asylum after trial for murder or manslaughter and of one patient who was charged with attempted homicide. Females were excluded from the present investigation as their cases were of a totally different nature. Dr. Revington points out that wives were the commonest victims, then children, and then parents and sisters. The case of attempted homicide was of special interest as illustrating the development of homicidal passion and was very fully worked out owing to the escape of the intended victim who furnished many particulars. The patient was a man, aged 38 years, married, the father of two children. He was syphilitic and of intemperate habits, and feeling himself growing prematurely old while his wife remained sprightly and attractive he became suspicious of her and watched for indications of infidelity, as he imagined that she was "tired of him and wanted a change." He developed hallucinations of smell and taste, searched his room to ascertain their cause, and thought that vapours rose from the floor and that the flower-pots were watered with noxious chemicals. These delusions alarmed his wife who consulted a medical man, with the result that the patient, now growing more suspicious than ever, thought that he tasted medicine in his food and imagined that he was being poisoned. He accused his wife of being a wanton and the frightened woman, anxious to protect herself and her children, foolishly invited a male friend to sleep in the house. He was now more than ever firmly convinced of his delusions and one night he crept into his wife's room with a hatchet and struck her a violent blow. She was badly wounded but recovered at length after her life had been despaired of. This case, says Dr. Revington, illustrated the fact that "homicide was a potentiality in almost all cases of delusion and hallucination, and that whether homicide occurred or did not occur was a matter of environment and of the length of time that elapsed before safety was sought within the walls of the asylum." Investigation of the remaining 49 patients led to the conclusion that homicidal lunatics were as a rule insane before they attempted murder, generally for some years. Five of these patients suffered from congenital mental defect and one each from epilepsy and general paralysis; in 20 of the other cases acute frenzy or visual hallucinations or "voices" prompted the patient to murder. Many of the others were alcoholic subjects, but there remained 12 cases where the cause could not be traced owing to absence of information or the demented condition of the patient. There existed, says Dr. Revington, no special homicidal mania, the ordinary motives of jealousy, misery, rage, or acute fear, combined with some mental weakness or disorder, furnishing the chief causes of homicide.

THE LIME-WASHING OF FACTORIES AND WORKSHOPS.

AN order has been issued by the Secretary of State granting special exceptions in regard to the lime-washing of factories in the case of electric generating works and lace-factories. A special exception will only be granted when in the factory a space of 2500 cubic feet space is afforded for each person employed therein. Of course, the order has not removed the obligation of keeping the factory in a cleanly state as prescribed by a subsection of the Factory and Workshop Act, 1901. Indeed, if it be shown that any part of a factory to which this exception applies is not in a cleanly state the occupier will be required to limewash the premises in accordance with the main requirement of the Act. The Act provides that the walls of factories if they have not been painted with oil or varnished once at least within seven years shall be limewashed once at least within every 14 months. The Secretary of State is apparently of the opinion that in electric generating works and in the frame dressing-rooms of lace-factories in which the number of cubic feet of space bears to the number of persons employed therein at one time a proportion of not less than 2500 to every person, cleansing by limewash is not imperative.

HONOURS TO PROFESSOR VON LEYDEN.

OUR correspondent in Berlin writes: The seventieth birthday of Professor von Leyden, the celebrated physician and clinical teacher, was celebrated here in an impressive manner. The large hall of the Philharmonic Building in Berlin was the scene of the proceedings, which were organised and effectively carried out by a committee consisting of former and present assistants, as well as other professional and non-professional friends, all acting under the general direction of the president, Professor Nothnagel of Vienna. When Professor von Leyden entered the hall, which was well filled, he was welcomed by the strains of a band of music, escorted by the committee to his place on the platform, and formally congratulated by Professor Nothnagel in a remarkably appropriate address introducing an outline of his personal history and specifying some of the more important features of his work. A great many deputations were then received, all of whom either delivered addresses or brought gifts, including contributions in aid of the benevolent institutions under Professor von Leyden's patronage. The first deputation was that of the Army Medical Corps, headed by General Staff Surgeon Dr. von Leuthold; it was followed by a long succession of delegates representing foreign and German universities, medical societies, and other professional and scientific associations; the former and present assistants

attended to pay their respects in person. Finally, a deputation representing the medical press was introduced, bringing copies of their respective journals issued for the occasion with dedications to Professor von Leyden. The proceedings lasted about three hours, during which the venerable object of so much enthusiasm is said to have spoken 28 times in reply to the various addresses and deputations. In the evening there was a banquet at which about 500 guests were present. The Verein für Innere Medicin, of which Professor von Leyden was the founder, held a separate celebration on its own account in Berlin a few days afterwards, with a special meeting of the society and a dinner as the principal events.

THE DISTRIBUTION OF PLAGUE.

THE distribution of plague throughout Egypt during the week ending May 4th was as follows: 3 cases and 1 death at Alexandria, 1 case and 2 deaths at Mit-Samanoud, 2 cases and 2 deaths at Deshneh, 2 cases at Tala, 1 case and 1 death at Beni-Mazar, 2 cases and 1 death at Benha, 2 cases and 2 deaths at Tookh, 1 case and 1 death at Tantah, and 8 cases and 5 deaths at Maghagha, making a total of 22 cases and 15 deaths. Cases have been reported from Syaffa in the Toukh Markaz and from Ezbet near Benha. In the neighbourhood of both these places cases had occurred previously. A telegram from the officer administering the Government of Hong-Kong which has been received at the Colonial Office states that 24 cases of bubonic plague and 19 deaths are reported for the week ending May 10th. In Cape Colony for the week ending April 19th 33 cases of plague were reported, five being Europeans and 28 belonging to the coloured and native population. There are 40 cases of plague in hospital at Sydney.

THE SIMULATION OF ABDOMINAL BY THORACIC INFLAMMATION.

AT the Clinical Society of London Mr. H. L. Barnard has recently called attention to the simulation of acute peritonitis by pleuro-pneumonic diseases,[1] a fact which seems to have escaped the notice of writers. He described cases of pleuro-pneumonia, pyo-pneumothorax, and pleurisy in which the abdomen was acutely tender, painful, and rigid, respiration was costal, and there were frequently nausea, hiccough, and vomiting. In some cases the onset was sudden with collapse like that of perforative peritonitis. The *Boston Medical and Surgical Journal* of April 17th contains an interesting paper by Dr. Maurice H. Richardson on a very similar subject—the simulation of appendicitis by acute intra-thoracic disease. He relates a series of cases in which acute abdominal pain with or without other symptoms suggested appendicitis so strongly that a surgeon was summoned. In one case even excision of the appendix was performed. A boy, aged six years, complained of pain in the right side and headache, vomited, and could retain nothing in his stomach. On the fourth day a medical man saw him and found that there was pain in the right iliac region at McBurney's point. The abdomen was tense and the temperature was 104·5° F. On the fifth day Dr. Richardson saw the patient. The pulse was 120 and the respiration was 40. The abdomen was distended and tender everywhere, the legs were drawn up, the respiration was noisy and rattling, the cheeks were flushed, and the eyes were sunken. Acute appendicitis was diagnosed and the boy was sent to hospital. The surgeon on duty accepted the diagnosis without question and removed an appendix which was thought to be the seat of "catarrhal inflammation." Later a right empyema was discovered. Recovery followed resection of a rib and drainage. Dr. Richardson points out that the temperature of 104·5° (which is unusual in appendicitis), the wheezing, and the respiration of 40 should have aroused a suspicion of thoracic disease. But the abdominal symptoms misled him. He relates four other cases—three in young children and one in a man, aged 35 years—in which the experience of the first case put him on his guard and enabled him to avoid error. Thus, a boy, aged four years, was taken ill with cough and restlessness. On the third day the temperature was 103° and the respiration was rapid but there were no signs of pulmonary disease. Next day the temperature was normal and he felt well, but in the evening the temperature rose to 101·5°. On the eighth day he complained of abdominal pain when he coughed. Repeated examinations failed to explain the cause of the rapid respiration. The slightest touch over McBurney's point caused the boy to complain vehemently. As the practitioner in attendance suspected appendicitis Dr. Richardson was sent for on the following day. The pain seemed severe and the boy complained of it when he moved. There had been vomiting. The abdomen was distended and tender all over but especially in the right iliac fossa. There were abundant pulmonary râles. It seemed wise to wait. On the following day signs of pneumonia began to appear. The abdominal symptoms disappeared in two days and recovery followed. In cases of thoracic disease with abdominal symptoms the diagnosis usually is not difficult if suspicion is aroused as to the real nature of the case. But when symptoms of thoracic disease are not obtrusive and when those of abdominal disease are the unwary practitioner may easily be dominated by the idea of abdominal disease and, not carefully examining the thorax, may fall into error as in the first case related. Mr. Barnard regards as of chief importance in pointing to the correct diagnosis the rapid respiration (40 and upwards), the slow good pulse (under 100), and the softening of the abdominal wall on inspiration. The pathology of such cases, as he points out, can be explained by "referred pain." Irritation in continuity of the lower six dorsal nerves would cause abdominal hyperæsthesia and spasm.

[1] THE LANCET, April 19th, 1902, p. 1110.

SUNSHINE AND COLD.

IT is in the experience of everyone that cold in May is very uncomfortable and trying, a feeling that is possibly accentuated by the ever present suggestion of what May could be according to the best tradition about the "merrie" month. There is no evidence, however, that the cold of spring has the same unfavourable effect in general upon the public health as has the cold of autumn and winter. According to the weekly vital statistics the present spell of cold weather does not seem unfavourably to have affected the death-rate—not even the mortality arising from diseases of the respiratory organs. On the contrary, the mortality has been steadily diminishing during the past few weeks. Undoubtedly the sun in springtime compensates for a good deal, although the warmth of its rays may not be felt. There is no warmth in the chemically active rays of the sun, those rays which stimulate plant and animal life and yet which are so highly destructive to the materies morbi. And it is a significant observation that in April and May, despite the cold winds that may prevail, the actinic power of the sun's rays reaches a maximum. At no other time of the year, not even in the hot days of July and August, are the health-giving rays of the sun so intense. This fact may probably account for the greater unfavourable influence on health of cold in autumn and winter when the actinic rays of the sun are at the minimum degree of intensity. Genial warmth is, of course, an important factor in the maintenance of the health standard, but there can be little doubt that the sunlight of spring possesses a greater compensating power over influences for evil than does that of the winter. Besides, the days of spring are

longer. That the energy of the light of the sun is greater in spring is abundantly proved by the degree of its photographic effects—effects which are analogous probably to its action upon the human organism, thus favourably influencing the powers of nutrition and raising the degree of resistance of the body to disease. Certain chemical compounds prove to be more readily decomposed and at a quicker rate in April and May than in any other months of the year. Chloroform, potassium iodide, hydrogen peroxide, and a great number of chemical salts give greater evidences of the disturbing action of light in the spring than in any other season, and nature herself responds to this quickening power, for growth is greatest and most vigorous when the chemical activity of the sun's rays is highest, and that, of course, is in spring. There need therefore be no cause for despair that the health will necessarily suffer because of a cold spring, for, fortunately, the rays of the sun are richest in vital agencies at this period of the year and undoubtedly these prevent and mitigate much mischief that would otherwise ensue.

CLINICAL STUDY FOR QUALIFIED MEDICAL MEN.

THE Association of Metropolitan Schools of Medicine is enlarging its boundaries. All the institutions which are recognised by the University of London as places of medical education have been invited to join in the work and we are informed that with very few exceptions they have consented—the addition being announced of such important institutions as the Royal London Ophthalmic Hospital; the Brompton Hospital for Diseases of the Chest; the Hospital for Children, Great Ormond-street; and the National Hospital for the Paralysed and Epileptic, Queen-square. The special departments of the general hospitals are also to be organised for the delivery of clinical lectures and demonstrations. London should be a great centre of post-graduate work and instruction and the Association of Metropolitan Schools of Medicine has a great future before it in the organisation of a scheme of clinical study for qualified medical men, forming a complement to the undergraduate teaching of the University of London. The office of the association is at the Examination Hall, Victoria Embankment, W.C., where all information concerning the working of the new departure may be obtained.

INSURANCE AGAINST SMALL-POX.

THE *Local Government Chronicle* has recently published some interesting particulars which it has obtained in reference to the extent to which persons have tried to safeguard themselves by insurance at "Lloyd's" against the effect of an attack of small-pox. The following is an extract from the particulars referred to:—

> Insurances are effected from £100 to £10,000 on individual lives but in every case revaccination within a year is insisted on. The nominal rate for a person living in a place where small-pox has not occurred is 2s. 6d. to insure the payment of £100 if within 12 months the person contracts small-pox, but these rates are increased according to localities. The following are the rates now prevailing in certain districts in London, but they apply to persons in business or professions of good class and not connected with docks or with institutions where small-pox is likely to prevail. The rates are: in Wandsworth, Hammersmith, Ilford, Seven Kings, Battersea, and Camberwell, 3s. 4d. per £100; in Tottenham, Dalston, Hackney, Islington, Bermondsey, Lambeth, Leyton, Wanstead, Walthamstow, Gravesend, Romford, Barnet, Glasgow, Southend, and Liverpool, 5s. per £100: in Edmonton, East and West Ham, Forest Gate, Rotherhithe, Mile End, Deptford, Plaistow, Poplar, Bow, Woolwich, Greenwich, Stratford, and Charlton, 10s. per £100. In certain districts where the conditions are recognised as unfavourable these rates do not apply and special terms have to be arranged in the case of each applicant. Amongst the places so classified are Stepney, Shoreditch, Dartford, Crayford, Bury St. Edmunds, Orsett, and Grays.

We note that certain occupations are specially dealt with—viz., medical men, publicans, undertakers, and butchers—and that there are special rates for families and schools. Many thousands of policies are said to have been issued, the money being, of course, payable in the event of an attack, whether fatal or not. Lloyd's would seem, therefore, to have made a good thing out of the epidemic, for when all is said—and we have no wish to minimise the importance of the epidemic which has not yet really abated—the number of cases has not been very large. The *Local Government Chronicle* calls attention to the element of risk that will be present at the time of the Coronation, when the class of people amongst whom the disease has made its greatest ravages will be gathered together. The warning should stimulate persons coming to London for the ceremony to be vaccinated and revaccinated.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

A GREAT effort will be made, we understand, to raise the Metropolitan Hospital Sunday Fund this year to £100,000. A friend to the Fund has most generously promised to add one-fourth to the amount raised this year in the churches and chapels. Last year £40,000 were raised by these collections; if £80,000 can be raised this year the coveted total of £100,000 will be secured through one donor's splendid munificence. Hospital Sunday is June 15th. We beg our readers to bear the date in mind. It is not too early for them to begin to use their influence in behalf of the Fund, which has for its patron the King and should in Coronation year achieve a record.

UNUSUAL FORMS OF NERVOUS PROSTRATION FOLLOWING OPERATIONS.

THOUGH not of frequent occurrence it is nevertheless important to recognise the fact that in some patients severe nervous prostration and even serious mental disturbance may follow directly upon surgical operations—a group of affections to which the term "post-operative psychoses" has been applied and reference to which was made in these columns three years ago.[1] Dr. Charles W. Burr, professor of mental diseases in the University of Philadelphia, points out in a contribution to the *Philadelphia Medical Journal* of April 19th that physicians are occasionally called upon to treat severe neurasthenia supervening in women and less commonly in men upon surgical operations. These were cases where, although the visible cause of disease had been entirely removed by surgical means, the patient did not regain health but suffered from marked weakness, lack of mental power, deficient emotional control, and general neurasthenia. Dr. Burr cites, for example, the case of a young man, of previous good health but of a type common in America, "over-refined, over-cultivated, with nerves not wholesomely blunted but altogether too fine-edged," who was suddenly seized with appendicitis. He was accordingly operated on at once; the wound healed quickly, there was no fever, and surgically the case was quite successful. Yet he continued weak and prostrate after the operation and he remained in bed for several weeks with sheer physical weakness and nervous prostration and it was only after some months of treatment that he fully recovered. The same untoward results, says Dr. Burr, followed the crushing of an arm in another patient—a lithæmic muscular man who was a highly emotional subject though he had great self-control. Dr. Burr also points out that women of nervous temperament, unable from childhood to withstand well the wear and tear of life and suffering from chronic pelvic or other disorder not progressive and not dangerous to life, are specially liable to such forms of nervous trouble and prostration after operation. Such a case, it is urged, should not be treated surgically at once when the diagnosis is made. It will be found that the patient is tired and worn out,

[1] THE LANCET, June 3rd, 1899, p. 1508, annotation on Paralyses and Psychoses following Prolonged Anæsthesia.

anæmic, suffering from loss of appetite and from constipation, and that she has vague pains about the body and queer, indescribable sensations about the head accompanied by insomnia. The only organic disease to account for these symptoms is apparently some trouble in the genitalia. Such a patient should not, says Dr. Burr, be operated on until the general health and nutrition have been built up by regulated diet, rest in bed, tonics, massage, and proper mental occupation. This will take some weeks but she will regain weight and colour and become cheerful, and the shock and prostration after the operation will be less and recovery will be quicker in coming. Sometimes, adds Dr. Burr, operation will be obviated entirely.

THE DESTRUCTOR NUISANCE AT TORQUAY.

IN the issues of THE LANCET of Jan. 25th, Feb. 1st, and Feb. 8th, at pp. 262, 335, and 404 respectively, we gave an account from the pen of our Special Sanitary Commissioner of the destructor nuisance at Torquay and of the various steps which the Town Council had taken with a view to abate the nuisance. We also made some suggestions as to what might be done in the situation. We see that at the monthly meeting of the Town Council held on May 6th a report by the sub-committee of the Destructor Committee was brought up for consideration. This report contained a statement by Mr. George E. Davis of Manchester, the expert who had been employed by the Town Council to advise it. Mr. Davis commenced his inquiry in November, 1901, and as a result of his researches various alterations were made in the destructor, which began working again on Dec. 23rd, 1901. Mr. Davis made a final investigation on March 18th, 1902, and reported that matters were satisfactory. There was no organic odour left in the chimney gases and the odours of unburned paraffins, of which he had complained in his first report, had entirely disappeared. The white vapour issuing from the chimney, according to him, consisted of sulphate of potash in an extremely fine state of division. It was quite harmless. Finally, continued Mr. Davis—

> I may add that the destructor will now give you a perfect combustion, even under very adverse conditions, and if you issue an instruction, which is carried out, that no refuse of any kind be charged into the destructor after any interval of stoppage until the temperature of the main flue at the point of entry to the combustion chamber has by preliminary heating reached 700° F., I am of opinion that you will not receive any more justifiable complaints.

Fortified by this report, Mr. Alderman Cumming contended that there was now less noxious matter issuing from the chimney of the destructor than from the chimney of any cottage in the Upton Valley. So much for the Town Council, which seems quite satisfied with the present condition of things. Dr. Henry Humphreys, however, writes to us under date May 8th to say that the smells are by no means done away with. He allows that less dust is blown up the chimney but he says that when the wind is in the north he and his household suffer greatly from the noisome vapours. This was notably the case on May 5th and 6th, when the wind blew from the north. Probably, therefore, the remedies suggested by Mr. Davis, excellent as far as they go, do not meet the prime cause of the trouble, with which the position of the chimney-top has much to do. At all events, the statements made in the report, together with those made by Mr. Alderman Cumming, are directly at variance with those made to us by Dr. Humphreys, and Mr. Davis's opinion that the Town Council will receive no more justifiable complaints looks as though it required modification. If every cottage chimney in the Upton Valley district gives as many unpleasant manifestations of its presence as, according to Dr. Humphreys, the destructor does in certain circumstances, we think that the Town Council must expect to hear more of the matter. But, further, the output of coal smoke upon which Mr. Alderman Cumming lays stress is likely to be augmented by the transference of the electric-lighting station into the unfortunate Upton Valley. And hereby hangs a tale. The issue of the *Torquay Directory* containing a notice of the meeting of the Town Council to which we have just referred contains also a report of the adjourned proceedings at which the Torquay corporation appeared at the Torquay Police-court on May 5th in answer to a summons issued at the instance of Commander Milne on behalf of the Royal Torquay Yacht Club. The corporation was charged with committing a smoke nuisance at the electric-lighting station. The corporation through its legal adviser pleaded that although nothing in the nature of a legal offence had been committed yet the complainants had probably suffered inconvenience. The corporation was doing everything possible to prevent nuisance and annoyance and would continue to do so. The bench allowed the summons to be withdrawn and the corporation paid the costs. There never was a smoke prosecution yet in which the defaulters did not say that they were doing, or had done, or would do, everything to prevent a nuisance. Also it is generally pleaded that the nuisance is either the fault of old boilers and furnaces, or new boilers and furnaces, or of lack of Welsh coal. The nuisance and the filthy smoke are never any person's fault. We hear that, under the reminder of the police-court, the corporation, which had previously contented itself with the usual *non possumus*, has now become active and that the volumes of thick smoke which lately disfigured the harbour are now not visible. We hope that Commander Milne will keep an eye upon the electric-lighting works and apply for more summonses if necessary.

THE LATE R. B. ANDERSON FUND.

SIR C. C. KNOLLYS, K.C.M.G., Colonial Secretary of Trinidad, in a letter bearing date April 19th, reports the receipt by him of the sum of £258 15*s.* 6*d.* subscribed to this fund, and the expenditure of that amount in the purchase and repair of three removeable wooden houses in Port-of-Spain by his instructions on behalf of Mrs. Anderson and her twin sons. In one of these houses she will reside, while from the other two she will draw an annual total net rental of about £50. He expresses his opinion that certainly the money could not have been expended to greater advantage. Mrs. Anderson also writes to convey her sincere thanks to Lord Stamford and his committee for their sympathy shown in the trouble they have taken, and her deep sense of gratitude to the subscribers and to the proprietors of the medical journals for the great help they have given which has relieved her of intense anxiety as to the future of her sons.

SYPHILIS AS A CAUSE OF FRIEDREICH'S DISEASE AND ALLIED NERVOUS AFFECTIONS.

AN interesting contribution on the etiology and symptoms of Friedreich's disease and allied nervous affections of the class known as "family paralyses"—that is, paralyses affecting more than one child of the same family—is published by Dr. A. Bayet in the *Journal de Neurologie* of April 20th last. Dr. Bayet deals at length with the symptoms and clinical histories of five patients and points out clearly the action of inherited syphilis as a potent cause in the production of these grave nervous affections. Two of the patients were boys, aged nine and 17 years respectively, and three were girls, aged nine, 11, and 14 years respectively. The youngest girl was one of twins, her twin sister having died from some obscure nervous affection. These five patients suffered either from the well-known symptoms of Friedreich's disease with corresponding defect of mental development or from cerebellar ataxy approximating to the "hereditary" type described by Pierre Marie.

They also presented a variety of signs which were regarded as conclusive evidence of inherited syphilis—viz., cicatrices about the mouth and lips the result of rhagades, corneal opacities from interstitial keratitis, "geographical tongue," and in two cases the formation of gummatous ulcers of the tonsil and ankle respectively. These two cases of gummatous ulcer responded well to treatment with alkaline iodides. It was thus clear, says Dr. Bayet, that syphilis inherited from the parents acted deleteriously on the growing nervous systems of the offspring, producing arrest of development of the neurons or nerve-cells of the cerebellum chiefly, but also of the cerebrum, so that the ataxy was accompanied by mental defect.

WHOSE BUSINESS?

AT the meeting of the Bath Board of Guardians held on April 30th a letter was read from the medical officer of the workhouse infirmary stating that on April 9th the supervision of the infirmary wards was taken out of the hands of the superintendent nurse and transferred to the master and matron of the workhouse on the ground that such supervision was not included in the words of the General Order of the Local Government Board, August 6th, 1897—viz., "in all matters of treatment of the sick." The medical officer added that he held exactly the opposite view, that the cleanliness of the wards was embodied in matters of treatment of the sick, an opinion with which most people certainly will agree.

CHOLERA AT EL TOR.

OUR correspondent in Egypt writes: "12 different steamers have arrived at El Tor from Jeddah with cholera on board and by the last weekly return it appears that 51 cases have been found on these steamers, while of this number 38 are already dead and 13 remain under treatment in the quarantine camp hospitals. It is satisfactory to find that only one case of cholera has been reported from Jeddah during the week ending May 3rd. Those of the pilgrims who have satisfactorily purged their quarantine are now beginning to pass through the Suez Canal and the Egyptian passengers are permitted to land at Suez."

THE ITALIAN HOSPITAL BALL.

THE annual ball in aid of the Italian Hospital, which was omitted last year through respect for the memory of the late Queen, was held on May 6th in Prince's Hall, Piccadilly, and proved to be even a greater success than on any former occasion. Nearly 700 guests were present, including the Italian Ambassador (President of the hospital) and Madame Panza, the Lord Mayor and Lady Mayoress, the Austrian Ambassador and Countess Deym, the Swiss Minister (M. Bourcart), Madame Ortelli (widow of the founder of the hospital), and representatives of the German and other embassies. Amongst the members of the honorary medical staff, to whose efforts the success attained was in a large measure due, there were present Sir Dyce Duckworth, Cavaliere J. C. F. Naumann, Cavaliere Distin Maddick, Dr. J. Donelan, Dr. T. V. Dickinson, Dr. J. P. Henry, and Cavaliere J. FitzGerald.

PETROLEUM LAMP ACCIDENTS.

RECENT fires in London having their origin in accidents with petroleum lamps have once more led to some interrogation of the Home Secretary on the subject. Mr. Ritchie could not promise any decided action in the matter, pointing out that the report of a Select Committee published in 1893 threw very grave doubt upon the idea that raising the flash-point by legislation would prevent lamp accidents. We are still of the opinion, based upon our own practical inquiries on the subject, that these accidents arise from the use of grossly defective and ridiculously low-priced lamps rather than from so-called low-flash oil, and that the only remedy will be to stop the sale of such lamps. There are immense practical and scientific difficulties in the way which render any legislation with regard to the flash-point of the oil hardly possible.

THE PREVALENCE OF SMALL-POX.

ON Saturday, May 10th, 25 cases were admitted to the hospitals of the Metropolitan Asylums Board; on Sunday, the 11th, 30 cases were received; on Monday, the 12th, there were 24 admissions; on Tuesday, the 13th, 26 fresh cases; and on Wednesday, the 14th, 23 cases were notified. In the county of Essex for the week ending May 10th 46 new cases were notified.

THE MEDICAL, SURGICAL, AND HYGIENIC EXHIBITION.

THE sixth annual Medical, Surgical, and Hygienic Exhibition will be held at the Queen's Hall on May 20th, 21st, 22nd, and 23rd from 1 P.M. to 10 P.M. A concert by a select orchestra will be rendered each afternoon from 3 to 6 and in the evening from 7 to 10. We are informed by the secretary that there will be many novelties shown which are likely to interest the medical profession.

"THE DANGEROUSLY INFLAMMABLE NATURE OF CELLULOID."[1]

WE are glad to note that a question was asked in the House of Lords on Monday as to whether some restrictions could not be placed upon the sale of celluloid, but the answer was decidedly disappointing. Lord Saltoun, who asked the question, referred to our own inquiries on the subject as well as to an original contribution printed in our columns two months ago. More than four years ago we abundantly demonstrated by practical experiments the dangerously inflammable nature of celluloid, and we suggested that the manufacturers of celluloid articles should be compelled to stamp plainly upon them the words "highly inflammable." Speaking on behalf of the Government Lord Belper said that the Secretary of State did not see his way to interfere by legislation with the sale of celluloid. Lord Belper made an extraordinary statement when he said that if properly manufactured and free from impurities celluloid would not take fire. Celluloid is celluloid, and celluloid is by its nature highly inflammable, just as gunpowder is.

THE HEREDITY OF POETS.

AS already noted in THE LANCET of May 10th, p. 1337, Möbius has, to the best of his belief, proved that poetic talent is in all cases traceable to the mother of the bard. The touch of sentiment in this position wins it ready acceptance. It is a feminine doctrine, the obvious inference from which is that the rougher sex is not apt to beget those gentle beings, the poets. Francis Galton, however, in "Hereditary Genius" (1869) has stated positively "in the case of poets and artists, the influence of the female line is enormously less than the male," and he supports his assertion with a "summary of relationships of 24 poets grouped into 20 families." From this it would appear that Goethe alone can trace poetic talent to his mother. "From my father," he says, "I inherit my frame and the steady guidance of my life; from dear little mother (Mütterchen) my happy disposition and love of story-telling (fabuliren)." Byron's mother is described as "strange, proud, passionate, and half-mad," and Tasso's as gifted in all respects. The other poets mentioned by Galton have some of them gifted fathers, as Milton; others gifted uncles and other relatives, mostly, alas, males. There are

[1] THE LANCET, Feb. 22nd, 1902, p. 540.

families in which literary and other talent is hereditary, as, for instance, the families of Coleridge and Wordsworth; but, as a rule, the sons of poets are dull dogs. The late Sir Percy Shelley should have been a paragon to judge by his ancestry, a poet father and a mother who wrote "Frankenstein." Sir Percy Shelley, however, was content to win only social popularity as an organiser of private theatricals. The son of the poetic Brownings is a meritorious painter—not a poet—and the descendants of certain other famous poetic marriages are, alas, in lunatic asylums. We have in mind three insane descendants of famous poets. It is possible that the children of poets are bored in early years by their surroundings and the mental attitude of their parents and make haste to become prosaic. Certain it is that the sons of political reformers and enthusiasts are often the most unprogressive of men, the sons of millionaires the least businesslike, and those of divines the least saintly.

THE annual meeting of the Association of Asylum Workers will be held on Thursday, May 22nd, 1902, at the Medical Society's House, 11, Chandos-street, Cavendish-square, W., at 4 P.M., Sir James Crichton Browne in the chair. A presentation will be made of two gold and two silver medals awarded by the association for long and meritorious nursing service and all interested in asylum work and workers are cordially invited to attend. Communications should be addressed to Dr. G. E. Shuttleworth of Ancaster House, Richmond Hill, Surrey, the honorary secretary of the association.

A CONVERSAZIONE of the Medical Society of London will be held in the rooms of the Society, 11, Chandos-street, Cavendish-square, W., on Monday, May 26th. The reception by the President is fixed for 8.30 P.M., and an Oration by Dr. Stephen Mackenzie will be given at 8.45 P.M. There will also be an exhibition of drawings and etchings of London and its vicinity, and music will be rendered by the Bijou Orchestra, when smoking will be *en règle*.

THE festival dinner of the Medical Graduates' College and Polyclinic will take place at the Criterion Restaurant on Thursday, June 5th. The Right Hon. H. H. Asquith will take the chair and will be supported by many well-known men, medical and lay, as stewards. Communications should be addressed to the secretary of the Dinner Committee at the College, 22, Chenies-street, Gower-street, W.C.

THE King has sanctioned the following promotions and appointments to the Order of the Hospital of St. John of Jerusalem in England: Mr. Robert Brudenell Carter, F.R.C.S. Eng., from Knight of Grace to Knight of Justice, and Mr. Robert Fraser Calder Leith, M.B., F.R.C.P. Edin., and Sir William Henry Bennett, K.C.V.O., F.R.C.S. Eng., to be Knights of Grace.

A DINNER of the present and past students and officials in connexion with the West London Hospital Post-Graduate College will take place on Wednesday, June 11th, 1902, at the Empire Rooms of the Trocadéro Restaurant, London, at 7.30 P.M. Mr. H. Percy Dunn will take the chair and communications should be addressed to Mr. L. A. Bidwell.

THE Glasgow University Club, London, will, on Tuesday, July 1st, give a dinner in honour of the Coronation in the Trocadero Restaurant, Piccadilly Circus. The Very Rev. Dr. Story, Principal of the University of Glasgow, has promised to preside. Particulars can be obtained from Dr. C. O. Hawthorne, 28, Weymouth-street, Portland-place, W.

THE opening lecture of the summer course at Brompton Hospital for Consumption and Diseases of the Chest will be delivered on Wednesday, May 21st, at 4 P.M., by Dr. T. Henry Green. The subject of the lecture will be Difficulties in the Recognition of Pulmonary Tuberculosis.

DR. J. ROSE BRADFORD, F.R.S., will give an address at a meeting of the University College Medical Society, on Wednesday, May 21st, on the Relation of Biology to Medicine. The chair will be taken by Mr. Victor Horsley at 8.30 P.M.

MR. THOMAS JOSEPH STAFFORD, F.R.C.S. Irel., has been appointed by the King a member of the Royal Commission on Sewage Disposal, in the room of Mr. Charles Philip Cotton, resigned.

UNIVERSITY COLLEGE, LONDON: APPEAL FOR THE EQUIPMENT AND ENDOWMENT OF ADVANCED UNIVERSITY EDUCATION AND RESEARCH.

ON May 9th in the Egyptian Hall of the Mansion House a meeting was held under the presidency of the Lord Mayor of London in support of the fund for advanced university education and research in connexion with University College, London. The following are the purposes for which funds are required:—

(*a*) For extension of buildings and laboratories to provide adequate accommodation for teaching and research in such important departments as modern languages, chemistry in all its branches, geology, physiology, pathology, bacteriology, botany, engineering in all its branches, advanced medical studies, &c., £250,000; (*b*) for maintenance and laboratory expenses an annual endowment of £6000, or a capital sum of £200,000; (*c*) for endowment of professorships and lectureships an annual endowment of £20,000, or a capital sum of £700,000. The total sum required is therefore £1,150,000.

The LORD MAYOR, in opening the proceedings, said that the occasion of the meeting was unique. Never before had the City been asked for such a large sum of money for the furtherance of education and research in London. Every day the struggle for commercial supremacy became more severe and the fact could not be disguised that commercial supremacy would follow intellectual supremacy. University College was the only institution that had declared itself ready to be incorporated with the University of London and the result of this appeal would be to help the University of London itself. He earnestly urged the citizens of London to subscribe largely to the fund.

The Duke of DEVONSHIRE proposed the following motion:—

That this meeting is of opinion that the incorporation of University College, London, in the University of London will materially promote higher education and research in London, and that, with this object, a fund should be raised to equip and endow the College adequately for such education and research.

After referring to the University Commission Bill of 1898, the result of which was to give to the University of London teaching powers and a controlling influence over the various schools which were then federated in the University, so that a course of instruction might be adopted fitted to the needs of the great modern metropolis, he urged that in all professions and industries success must be dependent on a knowledge of scientific principles and on the trained capacity to apply those principles. Universities, he said, were no longer a necessity for one class alone, but the welfare of the whole nation demanded that they should seek from all classes men of high intelligence and equip them with the highest training. As a nation we could not be said to have recognised the necessity of corresponding changes in our higher university training. The older Universities of Oxford and Cambridge had recognised the necessity and had made great efforts to equip themselves with the necessary machinery, but they had found themselves hampered by a want of the necessary resources. Speaking for the University of Cambridge, of which he was Chancellor, he assured his hearers that his university had no intention of abandoning its place in the front rank which it held as a centre of teaching and research. Our success as a nation depended upon the number of trained brains which were produced, but the older universities could not supply the number of trained men required for our national industries. In London the

university movement had up to the present time failed to receive that support which might be expected from the wealthiest city in the world. But now there was an opportunity afforded to the citizens to repair any past neglect and to create for London a university that would be worthy of the capital of the Empire and adapted to the special needs of the metropolis of the Empire. Before the proposed incorporation could take place certain preliminary conditions were required. The first was the extinction of the debt upon University College which had been accomplished by a gift of £30,000 from the Drapers' Company. The second was the removal of the University College School, an institution of a secondary type, in order to obtain the needful accommodation for university teaching and research. The third was an arrangement by which separate provision could be made for advanced medical studies so as to place the school of medicine on a proper footing. The estimated cost was £100,000 and that was the immediate object of the appeal. Of this sum £30,000 had been given by an anonymous donor and other sums were promised amounting to £15,000. Two great objects would be gained by the success of the appeal. First, a fuller utilisation of the resources of the College as an establishment for the promotion of advanced studies and, secondly, the provision for the University, which had as yet done little but create administrative machinery, of the means of entering properly equipped upon a twofold mission of instruction and research.

Sir MICHAEL FOSTER, M.P., who seconded the motion, said that the purse of London was big enough to help not only the University of London but the older universities as well. There ought to be in the very heart of London a real and effective university. The incorporation of University College with the University of London would benefit the people of London whatever might be their calling.

Professor A. W. RÜCKER, in supporting the motion, said that for many years he had taken an active share in higher education in London and he firmly believed that the question as to whether the development of the University of London was to take place along simple and most useful lines or whether it was to be carried out by a number of awkward and ill-fitting compromises depended entirely upon the success of the scheme of incorporation.

The motion was then carried unanimously.

Lord BRASSEY moved:—

That this meeting urges on the citizens of London the importance of giving a generous response to the appeal now made for £1,000,000 to equip and endow University College, London.

Lord AVEBURY seconded the motion.

Mr. LIONEL PHILLIPS, in supporting the motion, said that his firm would subscribe £10,000 to the present fund and reserve a larger donation for the future when he hoped a more extensive scheme would be brought forward. Much had to be done if the higher education in this country was to be put on a footing with that of America and Germany.

Mr. H. R. BEETON said that upon the progress of science and invention depended the better feeding of a people.

Captain JESSEL, M.P., also supported the motion, which was carried unanimously.

Sir RICHARD FARRANT (treasurer of the Fund Committee) said that although scarcely four weeks had passed since the appeal for funds had been made subscriptions amounting to over £110,000 had already been received. This sum included donations of "at least" £30,000 through Sir Michael Foster from "A Former Student" and £30,000 from the Drapers' Company.

On the motion of Lord REAY, seconded by Mr. A. PREVOST (Governor of the Bank of England), a vote of thanks was accorded to the Lord Mayor and the proceedings terminated.

THE METROPOLITAN WATER-SUPPLY: THE LONDON WATER BILL.

THE LANCET of May 3rd, p. 1274, contained a brief account of the proceedings of the Joint Committee of the two Houses of Parliament appointed to inquire into the London Water Bill. At the sitting of April 30th the committee decided to alter entirely the constitution of the proposed Water Board by withdrawing from the metropolitan boroughs and from the urban districts the representative powers which the Government Bill proposed should be conferred upon them. The immediate result of this decision has been already referred to in a leading article which appeared on May 10th, p. 1333. At the commencement of the tenth sitting of the committee Mr. J. D. FITZGERALD made a short statement on behalf not of the Local Government Board as Lord Balfour of Burleigh interrogatively suggested, but of the Government. Counsel then mentioned the points which had led the Government to decide as to the composition of the Water Board which it proposed and asked the committee to receive evidence on the question with a view to reversing the decision to which the committee had arrived. Counsel representing the City of Westminster supported this application and the committee resolved "by a majority" to receive the evidence on behalf of the metropolitan boroughs and the urban districts outside the metropolis should they think fit to tender it. It was then pointed out by Mr. FitzGerald on the part of the Government, that many of the urban districts and metropolitan boroughs had not petitioned because they were satisfied with the provisions contained in the Bill. Lord BALFOUR of BURLEIGH pointed out that as the committee had power to send for persons and papers there would be no technical difficulty in the matter of calling witnesses and that no question of *locus* need arise.

Seven witnesses were heard at this sitting. The first called was Mr. WILLIAM JOHN CRUMP, Justice of the Peace for the county of Middlesex and Mayor of Islington, who stated that when the municipal authorities of that borough heard that the Government was about to introduce a Bill creating a Water Board a resolution was almost unanimously carried requesting that a representation should be made to the Local Government Board to the effect that the borough councils should be represented on the board on the ground that they were the health authorities.

Mr. JAMES WHITE, mayor of the Borough of Lambeth, gave evidence to the effect that a majority of the borough council which he represented had passed a resolution in favour of the Bill in the form in which it was originally introduced into Parliament.

Mr. CHARLES WILSON, clerk to the Urban District Council of East Ham, stated that the district in which he was employed had increased enormously in population during recent years. The council was, of course, the sanitary authority for the district, which was in the area of the Essex County Council. He contended that the County Council did not properly represent the local urban authorities and that the latter were always complaining about it. The Essex County Council had so many rural members that as a matter of fact the urban population of East Ham—chiefly a working-class population—strongly felt that their rights were not properly looked after. For these reasons they contended that they ought to be represented on the Water Board.

Mr. EDMUND BARNES, mayor of St. Pancras, stated that the borough council of that town had considered the Government Bill when it was originally deposited and had passed a resolution in favour of the measure, and he believed that the council was of the same opinion still.

Colonel CLIFFORD PROBYN, mayor of the City of Westminster, said that the Bill had been considered by the Law and Parliamentary Committee of the Westminster Council, and that that council, without committing itself to the details of the Bill, strongly approved the proposal to establish a Water Board of members to be appointed by the metropolitan boroughs and by certain other public bodies. The borough councils were the sanitary authorities and were brought much more closely in touch with water consumers than was the case with the London County Council.

Mr. HAMILTON BENN, mayor of Greenwich, said briefly that, as representing the borough council of Greenwich, he distinctly desired that they should be represented on the Water Board and he would regret any decision which would deprive the metropolitan boroughs of such representation. The Greenwich Borough Council had passed a resolution to the effect that they ought to be represented on any water trust which might be formed.

Mr. T. W. WILLIAMS, the mayor of Lewisham, said that the borough council of which he was the representative had passed a resolution approving the principle of the Bill so far as representation was concerned.

At the eleventh sitting of the committee no less than 27 witnesses were examined.

Sir JOHN AIRD, M.P., gave evidence on behalf of Paddington, of which borough he is mayor. He stated that for

the sake of that place it was important that they should be represented on the Water Board.

MR. WALTER JOHNSON, mayor of Hackney, read a resolution passed by a committee of the council of that borough. It was somewhat long, but the most important part was to the effect that the council approved the Bill but that the borough of Hackney ought to have two representatives instead of only one on the Water Board. A public meeting was held at Hackney and a resolution was passed not in accordance with the mayor's views. The meeting protested against the proposal to hand over the vast interests of London in its water-supply to "an irresponsible authority on the discredited model of the Metropolitan Board of Works."

It is impossible in the space at our disposal to give a digest of all the evidence tendered, but the committee has at any rate been the means of bringing out a good deal of information which cannot fail to convince those who heard it that the opinion of the London sanitary authorities cannot be entirely ignored.

On May 12th the committee had a prolonged private sitting to decide as to what course it should take in regard to its decision of April 30th. The result of its deliberations was announced by Lord BALFOUR of BURLEIGH. It appears in effect to be that the schedule which was "referred back" to those in charge of the Bill will remain at present as part of the Bill and the details of the schedule will be considered when the Bill is examined clause by clause. The announcement made by Lord Balfour of Burleigh was that a motion had been brought forward at the private sitting of the committee to the effect that it should adhere to its resolution of April 30th. This motion was lost. There had been an equal number for and against the motion. The rules in force in the House of Lords governed committees. The rule was that in a case of equality of votes (if in the case of a committee everybody was present) the form of the Bill would stand. In this case the form of Schedule III. would be considered by the committee when it reached that point in the Bill after going through the previous clauses. The procedure adopted by the committee was arranged according to precedent and Lord BALFOUR of BURLEIGH announced that when the schedule was reached in the way indicated it was possible that a full statement might be made of the effects of the procedure on an amendment which might be moved.

After this announcement the committee proceeded to go through the Bill by clauses and certain amendments proposed to it by the water companies. On the request of counsel for the Local Government Board an adjournment was made to enable the Board to get up its case againstthe water companies' amendments.

LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY.

ANNUAL GENERAL MEETING.

DR. G. A. HERON took the chair at the annual general meeting of the London and Counties Medical Protection Society on May 8th, at their new offices, 31, Craven-street, Strand, London, W.C.

The annual report stated, that the society maintained a healthy increase in numbers and usefulness. Its growth naturally had brought with it increased responsibilities and expenses, but the latter appeared to retain a just proportion to the number of members. A member had to complain to the society of a deliberate and groundless slander, maliciously put in circulation aginst him by a former patient. The offender had thought it more prudent to settle the matter by publicly apologising, and paying the sum of £10 to a charity, than to face the consequences of the legal action commenced against him. There had been a number of cases in which patients had sought to evade payment by alleging want of skill on the part of their medical advisers; and in connexion with that subject the council, in order to prevent waste of time of the society's officials, wished to remind members that it was no part of the scope of the society to collect professional debts for members, where no charge was made against them, and where no principle of great importance to the profession generally was involved. Many difficult matters had been occupying the energies of the society during the year in reference to medical aid and friendly societies, and their medical officers. Several registered dentists had been summoned before the General Medical Council for issuing objectionable advertisements, and they had been leniently dealt with on promising not to offend again. In respect to the outbreak of small-pox, the society had had, on the one hand, to defend a member, who had been prosecuted by a metropolitan borough council, for not notifying as small-pox a case he believed at the time he saw it to be chicken-pox; and, on the other hand, members from whom damages had been claimed, because they had notified as small-pox cases subsequently declared not to be suffering from that disease. The report added, that all the cases were successfully defended. The society was in a sound financial condition, the surplus funds amounting to £1794.

DR. HERON moved the adoption of the report, and said that a certain well-known utterance of Mr. Joseph Chamberlain in the House of Commons, would not have been delivered if the medical profession were not politically impotent. Concerning the prosecution of quacks he said, that unless the society were prepared to spend enormous sums of money in legal proceedings they had better let them alone. The law, for some reason which he did not understand, seemed to favour the quacks. If the medical profession were politically powerful they might hope, at some distant date, to have that altered. He was not inclined to sympathise with the public when they complained of quacks. It occurred to him when he read of the atrocious way in which people allowed themselves to be gulled that, to use a schoolboy phrase, "it served them right." The obvious advantage of belonging to a society like theirs was so clear, that he confessed it seemed to him deplorable, that at the present moment there should be in the medical press requests made for subscriptions to aid a gentleman who had been loaded with heavy legal costs, after successfully defending an action at law which ought never to have been brought into court. It was the duty of every medical man to belong to a society for medical protection. The financial position of the London and Counties Medical Protection Society was sound enough to appeal to the common sense of every reasonable man in the medical profession; and if anyone hesitated to join the society, and one day became involved in a lawsuit, then he thought he would have only himself to blame because he ought to have protected himself against such a risk.

The motion, having been duly seconded, was carried unanimously.

DR. W. G. DICKINSON suggested that the annual report might be issued in a somewhat different form, and he advocated a fuller and more complete account of the cases dealt with by the society.

The meeting terminated after re-electing the council and officers.

THE ROYAL SOCIETY CONVERSAZIONE.

A VERY interesting and attractive series of experiments, illustrations, and specimens was presented to the view of the Fellows and their friends at the annual conversazione of the Royal Society which was held at Burlington House on May 14th, but it cannot be said that any particularly brilliant or epoch-making demonstration was given. Contrary to expectation, no illustrations were given of that remarkable property of certain elements, radio-activity, which has been so much discussed of late. Electrical phenomena held the first place and attention seems to have been particularly directed to the physical characteristics and properties of ultra-violet light.

Professor J. A. Fleming, for instance, showed an exceedingly interesting experiment illustrating the effect of ultra-violet light on the electric discharge. The action of the ultra-violet light emitted from the edge of the coating of a Leyden jar upon the spark of an induction coil charging it was shown. The jar is arranged between two "spark gaps" in parallel, one larger than the other and both connected with the terminals of an induction coil. The jar is placed nearest to the shorter gap; the spark then happens always at this gap. If a plate of mica or glass, which are very opague to ultra-violet rays, be interposed between the jar and the active gap a spark at once appears at the other gap. It was shown that this spark can be quenched by illuminating the first or shorter gap with ultra-violet light from burning magnesium or a naked electric arc and this can be done

from considerable distances. Hence the idea arises that the effect might be utilised for telegraph purposes without wires. Dealing with a similar phenomenon Dr. Dawson Turner showed in another exhibit that the ultra-violet radiation of a condenser spark will discharge an electrified body whether positively or negatively charged.

Of the various substances which have been tried rock salt seems to be the most transparent to ultra-violet radiations. Mr. Mackenzie Davidson, besides exhibiting some most realistic x-ray photographic effects, both by transparencies and negatives shown in a Wheatstone stereoscope, also demonstrated the remarkable fact that if an ordinary photographic plate be exposed to x-rays and then to ordinary diffused active light a reversed negative is obtained on development in bright white light. Plates were thus developed at intervals during the evening. Mr. A. C. Cossor exhibited a new therapeutic x-ray tube which is worthy of notice. It is so designed as to constitute an x-ray "applicator," the rays passing through a certain area which varies in different tubes according to the size of the diseased part which it is desired to submit to treatment. Mr. W. R. Pidgeon exhibited a new electrical influence machine suitable for x-ray work in camp in countries where the heat makes it difficult to preserve induction coils. The sectors being imbedded in a vulcanite-like substance called "volenite" and no glass or wax being used in the machine, it is not liable to damage and its efficiency is unimpaired by rough usage. Professor W. Ramsay showed the spectra of krypton and neon, the colour of the former tube when the discharge passes being regarded by many persons as lilac and by others as green. Professor Ramsay thinks this phenomenon "is conditioned by the size of the yellow spot on the retina." The wearing of glasses changes the colour to some persons, but to others it makes no difference. The spectrum of krypton is characterised by a brilliant yellow and a brilliant green flame with some lines in the deep blue and violet. Sir Norman Lockyer lent a very interesting series of photographs of metallic spark spectra in air and water. A similar subject was illustrated by Professor A. Schuster who was able to produce the spectrum of iron in the flame of the Bunsen burners. The method consisted in mixing a spray of the solution of an iron salt with the air introduced into the burner. With large dispersion a considerable number of lines appear seemingly identical with those of the arc spectrum. The process of natural colour photography based upon Young's theory of trichomatic vision was demonstrated in a beautiful series of natural colour photographs exhibited by Messrs. Sanger, Shepherd, and Co. Cameras for the process were shown. Negatives or colour records of the object are taken through colour filters admitting light of the three primary sensations —red, green, and blue-violet—in accordance with the power of the respective sensations to excite the eye. From the three negatives three coloured positives are printed upon a special film which when superimposed exactly reproduce the form and colour of the object photographed. Some of the effects obtained were projected upon the screen during the evening by means of the electric lantern with strikingly beautiful results.

Some of the exhibits were decidedly chemical in character. Such, for example, was the series of fabrics dyed with synthetic indigo and shown by the Badische Anilin- und Soda-Fabrik, Ludwigshafen. Specimens of the raw material napthalene and the intermediate products formed were shown. It is apparently identical with natural indigo and it is curious that the last stage in the process, whether the starting point be napthalene or the indigo plant, is identical—viz., the oxidation of indoxyl into indigo. Opposite to this exhibit Mr. W. Rosenhain showed an improved form of Thompson Coal Calorimeter. The method consists in burning the coal in a stream of oxygen in a closed vessel water-jacketed. The apparatus is so constructed as to be easily manipulated and to secure complete combustion and the complete transference of the heat to the water of the calorimeter. The ignition is started by electric current. The process is of importance in determining the calorific value of fuel.

Professor Wyndham Dunstan exhibited a very interesting series of poisonous fodder plants and food grains and their cyano-genetic glucosides. We have already referred in our columns to the production of hydrocyanic acid from the *Lotus Arabicus*, which grows on the banks of the Nile. The young plant contains a glucoside, lotusin, from which prussic acid is formed and at this stage it is highly poisonous to cattle.

Mr. A. Vernon Harcourt, F.R.S., exhibited an apparatus by means of which any desired proportion of air and chloroform could be mixed. The apparatus has already been described in THE LANCET.

Professor Silvanus P. Thompson exhibited the first folio Latin edition of *De Magnete* (London, 1600), the author of which was Dr. William Gilbert who was born in Colchester in 1540 and who died in 1603. He was President of the Royal College of Physicians and body-physician to Queen Elizabeth. Other editions of the same work were also shown, the whole forming a valuable and interesting collection.

Mr. J. Gray, B.Sc., exhibited some ingenious instruments designed especially for measuring and taking contours of the living head. The method is well adapted for showing cephalograms of different races. Dr. C. A. McMunn illustrated the spectrum of zircon and he also exhibited spongioporphyrin, the colouring matter of a certain Australian sponge, which is very remarkable in giving an absorption spectrum recalling that of oxy-hæmoglobin and of turacin.

The Marine Biological Association had an exhibit illustrating the manner in which the scales of fishes are an index of age. The scales of many fishes show a series of parallel eccentric lines which indicate successive increments of growth. Annual rings may be detected which indicate the age of the fish in years. Tropical medicine was represented in two exhibits by Lieutenant-Colonel D. Bruce, F.R.S., and Dr. Joseph Everett Dutton, respectively. The former showed a new species of parasite (*Trypanosoma Theileri*), discovered in the blood of cattle in South Africa. It infects cattle but not horses or dogs, and is easily distinguished from the tsetse fly. Dr. Dutton showed a specimen of trypanosoma found in the blood of a man. The presence of the parasite was associated with symptoms closely resembling those occurring in animals suffering from tsetse fly disease. Mr. W. E. Hoyte exhibited specimens of a Mediterranean cephaloped possessing luminous organs, the most striking feature of which is that they are concealed by the integument and are only effective by reason of its transparence in the living condition.

Looking Back.

FROM

THE LANCET, *SATURDAY, MAY* 15, 1824.

Foreign Department.

(From the Gazette de Santé, April 15.)

ANTIDOTE AGAINST CORROSIVE SUBLIMATE.

We stated some time ago that M. SADDEI had detected in gluten, the property of decomposing the deuto-chlorate of mercury. An Italian Journal records a case of the efficacy of this antidote. A medical pupil swallowed seven grains of corrosive sublimate, supposing it to be calomel. The effects of the poison soon manifested themselves. The emulsive powder of gluten was administered according to the method suggested by M. SADDEI; the sublimate was decomposed, and evacuated by vomiting.

M. VIRCY has an article in the *Journal de Pharmacie*, on the poison called woorara. It is probable that few persons are acquainted with it in France; it is, however, much employed in America where the savages of the Guiana arm the points of their arrows with it. The monkeys, and other animals wounded by these poisoned arrows, fall into violent convulsions, which shews that the poison acts principally on the nervous system; nevertheless the savages eat it without being incommoded by it. It is not known from what vegetables the woorara is extracted; Barcroft and other travellers say that it is taken from a plant of a climbing species; M. Vircy thinks it not impossible that the poisonous juice of the *cerbera* may be used in it. What is of more importance, however, is a remark which has been for some time made, namely, that the plants cultivated in gardens for the purposes of medicine, have undergone a sensible diminution in the strength of their properties. This circumstance should induce us to procure them in their wild state whenever we can do so; for they grow in soils less rich, less sheltered, and less likely to fill them with inert juices. An instance of this kind has been observed in the *hyoscíamus*.

niger by M. Ricken, Chemist at Wittand. This plant cultivated gives an extract almost inert: while in its wild state it gives a much stronger extract. This is a very material circumstance in the practice of medicine, and may account for a number of anomalies and discrepancies in the results obtained by different practitioners.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN extraordinary meeting of the Comitia was held on May 8th, Sir WILLIAM SELBY CHURCH, Bart., the President, being in the chair.

The following Members who had been duly elected at the last meeting were admitted as Fellows:—

Dr. Frank Montague Pope, Dr. Edward Malins, Dr. William Alfred Wills, Dr. Thomas Hancock Arnold Chaplin, Dr. William Page May, Dr. Arthur George Phear, Dr. George Francis Blacker, Dr. John Fawcett, Dr. Herbert Campbell Thomson, Dr. Albert Sidney Frankau Grünbaum, Dr. James Barr, and Dr. Joseph John Perkins.

The following communications were received: 1. From the secretary of the Brussels International Conference on the Prevention of Syphilis, praying the College to reconsider its resolution not to send a delegate. It was resolved:

That the College should accede to the request and that the choice of a delegate should be left to the President.

2. From the secretary of the Jenner Institute, stating that the annual general meeting will be held on June 30th; also that Dr. J. F. Payne retires by rotation from the Council and requesting the College to appoint a representative for the ensuing year. Dr. Payne not wishing to be re-elected the nomination was left in the hands of the President.

The REGISTRAR (Dr. E. Liveing) proposed, and the Senior Censor (Dr. T. T. Whipham) seconded, the enactment for the first time of the following by-law:

That Dr. Henry Carr Maudsley and Dr. William Camac Wilkinson, elected Fellows on April 24th, being resident in Australia, be admitted *in absentiâ*, any by-law to the contrary notwithstanding.

This was adopted.

The PRESIDENT then dissolved the Comitia.

THE CASE OF DR. W. T. LAW.

DR. J. G. GLOVER presided at a meeting of the members of the medical profession on May 9th in the Throne Room, Holborn Restaurant, London, W.C., held for the purpose of expressing sympathy with Dr. W. T. Law in connexion with a case in the law courts recently decided in his favour but in which his expenses amounted to some £700.

Dr. GLOVER commented on the smallness of the meeting, but added that fortunately several members of the profession had already sent substantial proofs of their sympathy. They had not met, he said, to discuss the treatment of asthma or the proper attitude of medical men towards a neurotic and asthmatic patient, but to express sympathy with Dr. Law. One good purpose of such a trial as that to which Dr. Law had been subjected was to give strong proof of the oneness of the medical profession; to show that when one member suffers the others sympathise. Their help, he added, should be efficient and prompt, as Dr. Law's expenses would reach the large sum of £700. It was a satisfactory proof of the sympathy and solidarity of the medical profession that promises of generous subscriptions had come in from all parts of the United Kingdom and from every class of the profession. Dr. Glover concluded by calling upon Dr. Theodore Williams who, he said, had done yeoman service in this cause, to propose the first motion.

Dr. R. PARAMORE, who had convened the meeting, having stated that he had received subscriptions amounting to over £360, Dr. THEODORE WILLIAMS moved:—

That this meeting begs to express its sympathy with Dr. Law in reference to the recent unjust action against him in the case of Forsythe *v.* Law; and its determination to do what it can to give that sympathy a practical form.

Dr. Williams concluded a very able statement of the facts of the case by proving that Dr. Law was perfectly innocent and that it had been shown that he had conducted himself in the strictest professional manner possible. He was glad to say from inquiries which he had made that a large number of the members of the medical profession had expressed their willingness to subscribe towards the fund in aid of defraying the expenses incurred.

The motion was carried unanimously.

The following motions were also passed:—

That this meeting expresses its thanks to Dr. Paramore for his active efforts in initiating this movement for the payment of Dr. Law's expenses and congratulates him on the measure of success already obtained.

That the President of the Royal College of Physicians of London, the President of the Royal College of Surgeons of England, the Master of the Apothecaries' Society, and the editors of the metropolitan medical journals be requested to act, with Dr. Paramore, as trustees of the fund now being raised at his instance for the payment of Dr. Law's heavy expenses in respect of his defence in the case of Forsythe *v.* Law.

This last motion was proposed by Dr. GLOVER.

The meeting closed with resolutions of thanks to Dr. Glover for presiding and to the proprietors of the Holborn Restaurant for allowing the use of the Throne Room for the purposes of the meeting.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on May 8th, the President, Mr. HENRY G. HOWSE, being in the chair.

Dr. GEORGE BAGOT FERGUSON was introduced and was admitted a Fellow of the College.

The SECRETARY reported the illness of Professor Stewart, conservator of the museum, and leave of absence was granted to him.

The PRESIDENT reported that he had accepted on behalf of the Council a portrait by C. R. Leslie, R.A., of Benjamin Travers, F.R.S., Sergeant-Surgeon to Queen Victoria and President of the College in 1847 and 1856, the portrait having been offered to the College by Dr. Llewellyn Morgan, executor of the late Miss Travers.

The best thanks of the Council were voted to Dr. Morgan for the gift.

A letter was read from Surgeon-General A. F. Bradshaw, C.B., honorary secretary to the Oxford Eye Hospital, stating that it is proposed to found in the University of Oxford a Readership in Ophthalmology, to be held in conjunction with the honorary surgeoncy to the Oxford Eye Hospital, and asking the College to allow its president to be an *ex-officio* member of a standing board for future elections to the combined appointments.

The Council agreed to this request.

A letter was read from Dr. FREDERICK J. SMITH, F.R.C.P. Lond., F.R.C.S. Eng., President of the Association of Licentiates of the Royal College of Physicians of London and Members of the Royal College of Surgeons of England, calling attention to a petition which has been signed by several hundreds of Licentiates and Members, and asking leave to present the petition by deputation.

A committee of the Council was appointed to receive the deputation.

Mr. A. WILLETT moved:—

That a committee be appointed to consider and report whether the time has not come for the two Royal Colleges by joint action to take such steps as may seem advisable for entering into combination with the University of London for a scheme of common examination for the degree of M.B. of the University and for the qualification of L.R.C.P. Lond. and M.R.C.S. Eng.

A committee was appointed for this purpose.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8602 births and 4894 deaths were registered during the week ending May 10th. The annual rate of mortality in these towns, which had been 18·3, 17·0, and 16·6 per 1000 in the three preceding weeks, rose again last week to 17·2 per 1000. In London the death-rate was 16·6 per 1000, while it averaged 17·4 in the 75 other large towns. The lowest death-rates in these towns were 7·5 in East Ham, 8·5 in Reading, 8·6 in King's Norton, 10·1 in Stockton-on-Tees, 10·3 in Handsworth, 11·0 in Hornsey and in Bournemouth, and 11·1 in Leyton; the

highest rates were 21·6 in Bolton, 22·1 in Liverpool, 22·7 in Bootle, 22·9 in Middlesbrough, 23·1 in Newcastle-on-Tyne, 23·3 in Salford, 24·6 in Birkenhead, and 26·1 in Rochdale. The 4894 deaths in these towns last week included 519 which were referred to the principal zymotic diseases, against 550, 534, and 489 in the three preceding weeks; of these 519 deaths 141 resulted from whooping-cough, 112 from measles, 79 from diphtheria, 62 from small-pox, 46 from scarlet fever, 42 from diarrhœa, and 37 from "fever" (principally enteric). In Ipswich, Norwich, Nottingham, Newport (Mon.), Swansea, and seven other smaller towns, no death from any of these principal zymotic diseases was registered; while they caused the highest proportional mortality in Tottenham, Hanley, Birmingham, Birkenhead, Oldham, Burnley, Barrow-in-Furness, and South Shields. Measles was proportionately most fatal in Bournemouth, Oldham, Burnley, Barrow-in-Furness, Huddersfield, West Hartlepool, and Gateshead; scarlet fever in Middlesbrough; diphtheria in Tottenham, Hanley, Coventry, and Merthyr Tydfil; whooping-cough in Leyton, Plymouth, Birmingham, Birkenhead, Barrow-in-Furness, and South Shields; and "fever" in Birkenhead. Of the 62 fatal cases of small-pox registered last week 44 belonged to London, eight to West Ham, four to Tottenham, two to East Ham, and one each to Willesden, Leyton, Walthamstow, and Burnley. The Metropolitan Asylums hospitals contained 1419 small-pox patients on Saturday last, May 10th, against 1431, 1515, and 1442 on the three preceding Saturdays; 248 new cases were admitted during the week, again 328, 367, and 250 in the three preceding weeks. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 2155, 2188, and 2222 at the end of the three preceding weeks, had declined again to 2212 at the end of last week; 256 new cases were admitted during the week, against 269, 283, and 258 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 316, 315, and 240 in the three preceding weeks, further fell to 231 last week, and were 39 below the corrected average number. The causes of 57, or 1·2 per cent., of the deaths in the 76 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Nottingham, Salford, Bradford, Leeds, Hull, and in 46 other smaller towns; the largest proportions of uncertified deaths were registered in Leicester, Liverpool, St. Helens, Rochdale, Blackburn, Sheffield, Sunderland, and Swansea.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 24·6, 21·1, and 18·9 per 1000 in the three preceding weeks, further declined to 18·1 per 1000 during the week ending May 10th, but was 0·9 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 9·9 in Leith and 16·9 in Edinburgh to 20·3 in Perth and 21·1 in Paisley. The 586 deaths in these towns included 16 which were referred to whooping-cough, 13 to diarrhœa, nine to measles, four to scarlet fever, three to diphtheria, and one to "fever." In all 46 deaths resulted from these principal zymotic diseases last week, against 63, 70, and 78 in the three preceding weeks. These 46 deaths were equal to an annual rate of 1·4 per 1000, which was 0·4 per 1000 below the zymotic death-rate last week in the 76 large English towns. The fatal cases of whooping-cough, which had been 29 and 28 in the two preceding weeks, declined last week to 16, of which eight were registered in Glasgow, five in Aberdeen, and two in Edinburgh. The deaths from diarrhœa, which had increased from eight to 23 in the four preceding weeks, declined again to 13 last week, and included six in Glasgow, four in Edinburgh, and two in Aberdeen. The fatal cases of measles, which had been 13 and 15 in the two preceding weeks, declined again last week to nine, of which three occurred in Glasgow, two in Dundee, and two in Paisley. The deaths from scarlet fever, which had been five and two in the two preceding weeks, rose again to four last week, and included two in Glasgow, where the three fatal cases of diphtheria also were registered. The deaths referred to diseases of the respiratory organs in these towns, which had been 199, 161, and 138 in the three preceding weeks, further declined last week to 113, and were slightly below the number in the corresponding period of last year. The causes of 20, or more than 3 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 26·8 and 24·9 per 1000 in the two preceding weeks, further declined to 22·6 per 1000 during the week ending May 10th. During the past four weeks the death-rate has averaged 24·3 per 1000, the rates during the same period being 17·0 in London and 18·5 in Edinburgh. The 164 deaths of persons belonging to Dublin registered during the week under notice were 17 below the number in the preceding week, and included 12 which were referred to the principal zymotic diseases, against 10 and nine in the two preceding weeks; of these, six resulted from measles, two from whooping-cough, two from "fever," and two from diarrhœa. These 12 deaths were equal to an annual rate of 1·7 per 1000, the zymotic death-rate during the same period being 2·3 in London and 1·3 in Edinburgh. The fatal cases of measles, which had been two, two, and three in the three preceding weeks, further increased last week to six. The deaths referred to different forms of "fever," which had been four and three in the two preceding weeks, declined to two last week. The mortality from both whooping-cough and diarrhœa was in excess of that recorded in the preceding week. The 164 deaths in Dublin last week included 34 of children under one year of age and 39 of persons aged upwards of 60 years; the deaths of infants were 13 above, and those of elderly persons 13 below, the respective numbers recorded in the preceding week. Seven inquest cases and four deaths from violence were registered; and 64, or more than a third, of the deaths occurred in public institutions. The causes of 10, or more than 6 per cent., of the deaths registered in Dublin last week were not certified.

VITAL STATISTICS OF LONDON DURING APRIL, 1902.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in each of the cities and boroughs in the county of London. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 10·5 per 1000 of the population, estimated at 4,579,107 persons in the middle of the year. In the three preceding months the rates had been 11·4, 11·4, and 11·9 per 1000 respectively. The rates were considerably below the average in Hammersmith, Fulham, Chelsea, the City of Westminster, Hampstead, and Stoke Newington, while they showed the largest excess in St. Pancras, Hackney, Bethnal Green, Stepney, Poplar, and Southwark. The prevalence of small-pox last month showed a considerable decline from that recorded in the preceding month; the greatest proportional prevalence of this disease was recorded in Hackney, Shoreditch, Bethnal Green, Stepney, Poplar, Southwark, and Woolwich. The Metropolitan Asylums hospitals contained 1442 small-pox patients at the end of last month, against 1135, 1309, and 1526 at the end of the three preceding months; the weekly admissions averaged 319, against 390 and 461 in the two preceding months. The prevalence of scarlet fever during the month under notice was very slightly in excess of that recorded in the preceding month; among the various metropolitan boroughs this disease was proportionally most prevalent in St. Pancras, Southwark, Battersea, Wandsworth, Camberwell, Deptford, and Lewisham. The number of scarlet fever patients under treatment in the Metropolitan Asylums hospitals, which had been 2501, 2250, and 2113 at the end of the three preceding months, had risen again to 2176 at the end of last month; the weekly admissions averaged 253, against 266, 234, and 258 in the three preceding months. Diphtheria, also, was slightly less prevalent during April than in the previous months of this year; the greatest proportional prevalence of this disease occurred in St. Pancras, Islington, Hackney, Poplar, Camberwell, and Lewisham. There were 1035 diphtheria patients under treatment in the Metropolitan Asylums hospitals at the end of last month, against 1231, 1154, and 1123 respectively at the end of the three preceding months; the weekly admissions averaged 140, against 167, 154, and 156 in the three preceding months. The prevalence of enteric fever showed no variation from that recorded in the preceding month; among the various metropolitan boroughs "fever" was proportionally most

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING APRIL, 1902.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1902.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of Infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON...	4,579,107	1394	1542	1027	1	169	1	26	432	—	4592	19·5	254	294	50	112	225	—	16	—	60	1011	2·2	7374	16·8	126
West Districts.																										
Paddington	145,107	27	36	21	—	4	—	2	8	—	98	7·0	6	6	—	3	1	—	1	—	—	17	1·2	197	14·2	100
Kensington	177,605	19	43	28	—	3	—	1	15	—	109	6·4	2	11	2	2	2	—	—	—	3	22	1·3	237	13·9	106
Hammersmith	114,210	9	15	14	—	1	—	—	10	—	49	4·5	—	15	—	5	2	—	1	—	—	23	2·1	173	15·8	138
Fulham	143,102	11	29	30	—	3	—	1	13	—	87	6·3	1	31	—	4	7	—	—	—	2	45	3·3	230	16·8	131
Chelsea	74,018	8	13	11	—	1	—	2	5	—	40	5·6	2	10	2	—	1	—	—	—	—	15	2·1	122	17·2	124
City of Westminster	180,800	18	46	21	—	2	—	1	13	—	101	5·8	3	2	—	1	2	—	—	—	3	11	0·6	244	14·1	119
North Districts.																										
St. Marylebone	132,069	15	24	19	—	5	—	1	24	—	88	6·9	4	16	3	1	1	—	—	—	3	28	2·2	189	14·9	100
Hampstead	83,743	5	20	10	—	3	—	—	4	—	42	5·2	1	2	2	1	1	—	—	—	2	9	1·1	93	11·6	82
St. Pancras	235,596	52	122	93	—	8	—	3	23	—	301	13·3	10	6	6	6	16	—	1	—	4	49	2·2	407	18·0	145
Islington	337,268	68	108	103	—	5	1	3	31	—	319	9·9	10	16	4	16	8	—	—	—	2	56	1·7	524	16·2	111
Stoke Newington	51,700	7	13	4	—	2	—	—	4	—	30	6·1	1	2	1	—	—	—	—	—	—	4	0·8	69	13·9	103
Hackney	221,926	127	59	69	—	16	—	—	25	—	296	13·9	24	19	—	5	12	—	2	—	1	63	3·0	316	14·8	116
Central Districts.																										
Holborn	58,535	15	16	15	—	4	—	1	6	—	57	10·2	1	11	—	1	6	—	—	—	—	19	3·4	129	23·0	241
Finsbury	100,487	15	29	24	—	—	—	—	7	—	75	7·8	1	10	1	5	10	—	—	—	1	28	2·9	215	22·3	135
City of London	25,598	8	4	5	—	—	—	—	6	—	23	9·4	3	1	—	—	—	—	—	—	1	5	2·0	53	21·6	125
East Districts.																										
Shoreditch	117,980	66	22	21	—	7	—	2	8	—	126	11·1	7	10	—	4	12	—	—	—	6	39	3·4	229	20·2	152
Bethnal Green	129,889	70	45	24	—	7	—	—	17	—	163	13·1	16	13	1	4	11	—	1	—	1	47	3·8	276	22·2	172
Stepney	300,551	224	116	71	—	5	—	1	23	—	440	15·3	48	23	3	9	32	—	—	—	3	118	4·1	612	21·2	121
Poplar	169,214	133	59	57	—	10	—	1	24	—	284	17·5	16	9	1	8	5	—	—	—	3	42	2·6	344	21·2	155
South Districts.																										
Southwark	206,825	90	88	47	—	22	—	1	25	—	270	14·1	12	18	3	4	9	—	2	—	8	56	2·8	422	21·3	140
Bermondsey	130,218	47	43	26	1	7	—	—	13	—	137	11·1	11	7	2	3	16	—	1	—	3	43	3·5	239	19·3	133
Lambeth	305,102	68	91	51	—	11	—	1	35	—	257	8·8	11	9	2	4	13	—	2	—	4	45	1·5	431	14·7	115
Battersea	171,401	23	97	17	—	8	—	1	14	—	160	9·7	6	23	4	1	12	—	—	—	4	50	3·0	237	14·4	106
Wandsworth	241,810	37	101	61	—	8	—	—	13	—	220	9·5	6	7	3	8	9	—	—	—	1	34	1·5	312	13·5	151
Camberwell	262,775	82	127	85	—	5	—	1	20	—	320	12·7	17	1	5	10	12	—	2	—	2	49	1·9	386	15·3	104
Deptford	111,577	27	56	23	—	8	—	—	13	—	127	11·9	8	—	1	2	6	—	1	—	—	18	1·7	169	15·8	125
Greenwich	98,013	24	38	22	—	3	—	1	12	—	100	10·6	12	5	—	—	2	—	—	—	1	20	2·1	172	18·3	93
Lewisham	132,432	16	55	39	—	4	—	—	11	—	125	9·8	3	—	3	4	11	—	2	—	1	24	1·9	173	13·6	96
Woolwich...	119,556	74	25	15	—	4	—	2	10	—	130	11·3	12	11	1	1	6	—	—	—	1	32	2·8	174	15·2	111
Port of London	—	3	2	1	—	3	—	—	—	—	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

prevalent in Hackney, Holborn, Shoreditch, Poplar, Southwark, and Deptford. The number of enteric fever patients in the Metropolitan Asylums hospitals, which had been 128, 142, and 121 at the end of the three preceding months, had further declined to 115 at the end of last month; the weekly admissions averaged 17, and corresponded with the number in the preceding month. Erysipelas was proportionally most prevalent in St. Marylebone, Bethnal Green, Poplar, Southwark, Deptford, and Greenwich. The 26 cases of puerperal fever notified during the month included three in St. Pancras, three in Islington, and two each in Paddington, Chelsea, Shoreditch, and Woolwich.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various metropolitan boroughs, the deaths occurring in public institutions having been distributed among the various boroughs in which the deceased persons had previously resided. During the five weeks ending May 3rd the deaths of 7374 persons belonging to London were registered, equal to an annual rate of 16·8 per 1000, against 18·3, 25·9, and 20·4 in the three preceding months. The lowest death-rates last month in the various metropolitan boroughs were 11·6 in Hampstead, 13·5 in Wandsworth, 13·6 in Lewisham, 13·9 in Kensington and in Stoke Newington, and 14·1 in the City of Westminster; the highest rates were 21·2 in Stepney and in Poplar, 21·3 in Southwark, 21·6 in the City of London, 22·2 in Bethnal Green, 22·3 in Finsbury, and 23·0 in Holborn. The 7374 deaths from all causes included 254 from small-pox, 294 from measles, 50 from scarlet fever, 112 from diphtheria, 225 from whooping-cough, 16 from enteric fever, and 60 from diarrhœa; in all, 1011 deaths were referred to these principal zymotic diseases, equal to an annual rate of 2·3 per 1000. The lowest death-rates last month from these diseases among the various boroughs were 0·6 in the City of Westminster, 0·8 in Stoke Newington, 1·1 in Hampstead, 1·2 in Paddington, 1·3 in Kensington, and 1·5 in Lambeth and in Wandsworth; the highest rates were 3·3 in Fulham, 3·4 in Holborn and in Shoreditch, 3·5 in Bermondsey, 3·8 in Bethnal Green, and 4·1 in Stepney. The 254 fatal cases of small-pox showed a slight decline from the numbers recorded in the two preceding months; the greatest proportional mortality from this disease occurred in Hackney, the City of London, Bethnal Green, Stepney, Poplar, Greenwich, and Woolwich. The 294 deaths from measles were 95 below the average number in the corresponding periods of the 10 preceding years; among the various metropolitan boroughs this disease was proportionally most fatal in Hammersmith, Fulham, Chelsea, St. Marylebone, Holborn, Finsbury, Bethnal Green, and Battersea. The 50 fatal cases of scarlet fever showed a decline of 20 from the corrected average number; the greatest proportional mortality from this disease was recorded in Chelsea, St. Marylebone, Hampstead, St. Pancras, Battersea, and Lewisham. The 112 deaths from diphtheria were 60 below the average number in the corresponding periods of the 10 preceding years. Among the various metropolitan boroughs this disease was proportionally most fatal in Hammersmith, Islington, Finsbury, Poplar, and Camberwell. The 225 fatal cases of whooping-cough showed a decline of 85 from the corrected average number; the greatest proportional mortality from this disease occurred in Holborn, Finsbury, Shoreditch, Bethnal Green, Stepney, and Bermondsey. The 16 deaths referred to enteric fever were also less than one-half of the corrected average number in the corresponding periods of the 10 preceding years; among the various metropolitan boroughs this disease was proportionally most fatal in Hackney, Southwark, Lambeth, Camberwell, and Lewisham. The 60 fatal cases of diarrhœa also showed a slight decline from the corrected average number; the highest death-rates from this disease were recorded in St. Marylebone, Hampstead, Shoreditch, Southwark, Bermondsey, and Battersea. In conclusion, it may be stated that the aggregate mortality in London last month from the principal zymotic diseases was more than 2 per cent. below the average.

Infant mortality in London during April, measured by the proportion of deaths among children under one year of age to registered births, was equal to 126 per 1000. The lowest rates of infant mortality were recorded in Paddington, St. Marylebone, Hampstead, Stoke Newington, Greenwich, and Lewisham; and the highest rates in St. Pancras, Holborn, Shoreditch, Bethnal Green, Poplar, and Wandsworth.

* Including membranous croup.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Surgeons: J. H. Lightfoot to the *Formidable* and A. R. Thomas to the *Hearty*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel T. M. Corker proceeds to Woolwich and Lieutenant T. Biggam joins at Hounslow for duty.

Lieutenant Howard Ensor, D.S.O., is seconded for service with the Egyptian Army. Dated May 2nd, 1902.

Major S. C. Philson, from the Seconded List, to be Major, vice R. E. Kelly, placed on half-pay. Dated April 16th, 1902.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant C. F. Spinks having resigned his Volunteer appointment, ceases to belong to the Army Medical Reserve of Officers. Dated May 10th, 1902.

IMPERIAL YEOMANRY.

36th Battalion: Richard Ahern to be Medical Officer, with the temporary rank of Captain.

VOLUNTEER CORPS.

Royal Garrison Artillery (Volunteers).—1st Newcastle-on-Tyne: Lieutenant George Nicol Wilson resigns his commission and is appointed Surgeon-Lieutenant. 1st Norfolk: William Oliver Beddard to be Surgeon-Lieutenant.

Rifle: 1st Volunteer Battalion the Royal Scots Fusiliers: Brigade-Surgeon-Lieutenant-Colonel W. Wilson reverts to the rank of Surgeon-Lieutenant-Colonel on relinquishing the appointment of Senior Medical Officer to the late Clyde Volunteer Infantry Brigade on reorganisation. 2nd (Earl of Chester's) Volunteer Battalion the Cheshire Regiment: Brigade-Surgeon-Lieutenant-Colonel H. W. King is seconded whilst holding the appointment of Senior Medical Officer to the Cheshire Volunteer Infantry Brigade. 1st (Ross Highland) Volunteer Battalion Seaforth Highlanders (Ross-shire Buffs, the Duke of Albany's): Surgeon-Lieutenant J. Cameron to be Surgeon-Captain. 3rd (Morayshire) Volunteer Battalion, Seaforth Highlanders (Ross-shire Buffs, the Duke of Albany's): Surgeon-Captain G. C. Milligan resigns his commission. 1st (Inverness-shire Highland) Volunteer Battalion the Queen's Own Cameron Highlanders: Lieutenant-Colonel Thomas Ranken Macdonald, late Indian Medical Service, to be Surgeon-Lieutenant-Colonel 3rd (Renfrewshire) Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders): Charles Whish to be Surgeon-Lieutenant.

BEARER COMPANY.

Harwich: William Alexander Gibb to be Surgeon-Lieutenant.

SOUTH AFRICAN WAR NOTES.

Lieutenant Beatty, R.A.M.C., was reported "not so well" on May 10th, having previously been reported "improving."

Captain A. E. Smithson, R.A.M.C., and Civil Surgeon Burch are returning from South Africa to England in the s.s. *Canada*, which left Cape Town on May 7th.

THE VICTORIA CROSS.

The King has signified his intention to confer the decoration of the Victoria Cross on Surgeon-Captain A. Martin-Leake, South African Constabulary, for his conspicuous bravery in South Africa. "During the action at Vlakfontein on Feb. 8th, 1892, Surgeon-Captain Martin-Leake went up to a wounded man and attended to him under a heavy fire from about 40 Boers at 100 yards range. He then went to the assistance of a wounded officer, and whilst trying to place him in a comfortable position was shot three times, but would not give in till he rolled over thoroughly exhausted. All the eight men at this point were wounded, and while they were lying on the veldt Surgeon-Captain Martin-Leake refused water till every one else had been served."

"MENTIONED IN DESPATCHES."

This is the title of a useful publication which has just been issued by the *Army and Navy Gazette* (York-street, Covent-garden, W.C.) at the price of 1*s.* net. It contains in a handy form lists of all the officers and men of the Royal Navy and the Army who have been mentioned in despatches and have received honours and promotions for their services in South Africa from the beginning of the war in 1899 to May 6th, 1902. The lists have been compiled from official gazettes

and have been thoroughly revised and corrected in accordance with later *London Gazettes*. Inasmuch as some of the issues of the *London Gazette* containing the South African war despatches are now out of print the book is of great value as a work of reference. Among the list of those who have gained the Victoria Cross are the names of Lieutenant-Colonel Babtie, C.M.G., R.A.M.C.; Surgeon-Captain Crean, Imperial Light Horse; Lieutenant Douglas, R.A.M.C.; Captain Howse, New South Wales Medical Staff Corps; Captain Inkson, R.A.M.C.; and Captain Nickerson, R.A.M.C. (It will be seen from another paragraph on page 1425 that the name of Surgeon-Captain A. Martin-Leake, South African Constabulary, must now be added to this list.) One K.C.B. was conferred upon a member of the medical profession for services in connexion with the war—namely, on the late Sir William Mac Cormac, Bart., K.C.V.O., and 20 C.B.'s, two K.C.M.G.'s, 47 C.M.G.'s, and 37 D.S.O.'s have been received by members of the medical profession. Non-commissioned officers and men of the Royal Army Medical Corps have had 38 Distinguished Conduct medals, and a sergeant-major a bar for the medal he already possessed.

Two D.S.O.'s have been conferred upon medical officers of the Royal Navy.

Upon nursing sisters and other ladies 48 Royal Red Crosses have been bestowed.

AUGMENTATION OF THE GERMAN NAVY.

It is well known that Germany intends to become a first-class naval power in the near future. This is clearly shown in the scheme for increasing the *personnel* of the navy which has been elaborated by the authorities. According to this document the strength of the German navy in 1920 will be as follows: executive officers, 2088; engineers, 427; paymasters, 234; and petty officers, bluejackets, stokers, and torpedo hands, 54,920. The strength of the medical department has been more than doubled, as shown below:—

Medical officers of the	Strength, 1900.	Strength, 1920.	Increase.
First class	1	1	—
Second ,, ...	2	4	2
Third ,, ...	26	83	57
Fourth ,, ...	56	115	59
Fifth ,, ...	68	138	70
Totals	153	341	188

Of the above upwards of half are designated for sea service as follows: second-class medical officer, 1; third-class, 55; fourth-class, 61; fifth-class, 69; total, 186. One-fifteenth of the officers belonging to the last two classes are to be detached annually from general service for instruction in the various scientific institutions at Berlin. The number of medical officers of all grades for duty at the different stations has been established in the following manner: (1) Service afloat. North Sea Fleet (active list), 56. Ditto (reserve), 35. Vessels absent from home waters, 40. Ditto (for relief), 20. Training ships, 16. Special service ships, 5. (2) Service on land. Berlin, 22; Kiel, 70; Dantzig, 2; Friedrichson, 3; Wilhelmshaven, 66; Lehe, 2; Cuxhaven, 2; Heligoland, 1; Yokohama, 1; total, 341. The names of a few medical officers at Kiel and Wilhelmshaven are on the sea-going list.

THE ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES.

The eleventh annual meeting of this association will be held at Washington, D.C., on June 5th, 6th, and 7th, 1902, under the presidency of Lieutenant-Colonel John Van R. Hoff, Deputy-Surgeon-General of the United States Army. Some important papers dealing with medical military subjects will be read during the meeting and there will be an exhibition of medico-military materials. Major James Evelyn Pilcher, Brigade-Surgeon, U.S.V., whose address is Carlisle, Pennsylvania, will act as secretary to the meeting.

ISOLATION ACCOMMODATION.—Dr. F. St. George Mivart, of the Local Government Board, conducted an inquiry on April 16th at Stroud in reference to the application of the local joint hospital board for permission to borrow £12,500 for the purpose of erecting an infectious diseases hospital upon a site already acquired at Carles Green, Stroud.

Correspondence.

"Audi alteram partem."

THE BATTLE OF THE CLUBS: THE COVENTRY PUBLIC MEDICAL SERVICE.

To the Editors of THE LANCET.

SIRS,—As this organisation has now been in existence for 10 years we are in a position to lay before the profession the result of our work in the interest of reform in medical contract work. As a result of this strong combination in the profession we may pride ourselves on the fact that Coventry has taken the foremost position in this pioneer work. Built upon the ashes of medical aid associations it may now be regarded as the largest existing organisation under professional control. The recent decision of the General Medical Council on the question of medical aid associations appears to render some agency of this kind a necessity to medical men. Each city or town should absorb in a service under its own control the bulk of these patients or those suitable for club or dispensary treatment. Many problems affecting the profession may under these conditions attain a certain measure of solution. In our experience there is no necessity to admit the lay element on the committee of management. Coöperative societies, trade unions, or other kindred combinations have attained an extraordinary measure of success under the management of working-men so-called. Why should not medical men possess the necessary business talent to develop a working scheme capable of protecting their own interests? Our service has now enrolled 10,000 members under a wage-limit and our gross receipts for the year amounted to £1986 17*s.* 6*d.* We paid to our chemists £456 4*s.* 2*d.* and the medical officers, after deducting all working expenses, were paid £1238 15*s.* 6*d.* We have some slight expense in organising our scientific branch, some of our work being thus carried on in the interest of medical progress. We have had during the year 10 meetings at which there were addresses and discussions of great value to the profession. Amongst those taking part were Dr. E. Malins, Dr. E. Rickards, Mr. G. Heaton, and Mr. J. F. Hall-Edwards of Birmingham, Dr. J. H. Sequeira, Dr. L. Hemington Pegler of London, and Mr. J. E. Swindlehurst, city engineer of Coventry. We thus combine together in our service the scientific and the commercial interests of the profession. During the year 2684 new members joined, mostly of the labouring class, and our collections over the previous year showed an increase of £150 19*s.* 8*d.*—I am, Sirs, yours faithfully,

W. RICHARDSON RICE, M.D., Honorary Secretary.

May 11th, 1902.

INHALATION.

To the Editors of THE LANCET.

SIRS,—In the Baillie lecture delivered by Dr. W. H. Dickinson at St. George's Hospital and published in THE LANCET of May 10th, p. 1297, there are some remarks on inhalation which deserve attention. They are as follows: "Whether we shall ever find a way of killing the visitor without doing serious damage to the host is a question for the future—we have not done so yet." May I observe on this remark that we are not likely to do so while such opinions prevail. In an old number of St. George's Hospital Reports a short paper was published on Some Remarks on Inhalation. There was a quotation in it from Dr. Paris on inhalation to this effect: "Unfortunately the injudicious and empirical spirit with which these inquiries have hitherto been conducted has thrown such discredit upon the subject that the practitioner who would resume the investigation must be prepared to hear his understanding or his integrity questioned."

In THE LANCET of May 21st, 1892 (p. 1130), just 10 years ago almost to a day, you were good enough to publish a paper on the Scientific Principles of Inhalation. It was written with the intention of relieving the subject of inhalation to some extent from the "discredit" that Dr. Paris remarked upon. How the vapores of our old Pharmacopœia with their totally inefficacious directions for administration could be tolerated by the profession was a mystery to me only to be accounted for by complete ignorance of the subject, and I think one of

the most laudable changes made was their extermination. We all should take an active interest in the subject of inhalation, and it seems wiser and better to try to improve than to sit still and wait for a future that patience will not help.

I am, Sirs, yours faithfully,

May 13th, 1902. ROBERT J. LEE.

DOES PUERPERAL ECLAMPSIA TEND TO RECUR?

To the Editors of THE LANCET.

SIRS,—A question of considerable medical interest has arisen in the course of my practice. A patient of mine had during her first confinement a most serious attack of puerperal eclampsia from which, after long and anxious watching, she recovered. Her husband, who is naturally anxious, has now appealed to me as to the risk she would run of again incurring this formidable complaint in the event of her becoming pregnant a second time. Not wishing to take the responsibility of answering this grave question on my own limited experience I at once consulted all the leading authorities, from the time of Churchill up to the present day, on the subject, without gaining the slightest assistance in my dilemma. Such being most unsatisfactory, I at once bethought me of your valuable journal and decided to write you in the hope that some among your readers and contributors might have it in their power to help me in this most awkward predicament. Thanking you in anticipation,

I remain, Sirs, yours faithfully,

D. F. MACGILLICUDDY, M.B., B.S. Melb.

Richmond, Victoria, Australia, March 24th, 1902.

LARGE DOSES OF STRYCHNINE IN SURGICAL SHOCK.

To the Editors of THE LANCET.

SIRS,—If Mr. C. Hamilton Whiteford thinks that I have failed to appreciate the difference between strychnine in one large dose administered to a non-collapsed patient and graduated doses of the same drug given to a patient suffering from shock I may at once disabuse his mind of the fallacy which he labours under. My strictures referred to the ideal system so ably championed by Mr. Whiteford, and the questions which I asked the advocates of this new form of drugging were framed, not in the study, but were prompted by bedside observation. If my theory of the terrific spasms is perfect, as Mr. Whiteford says it is, I am glad to hear it, for, unlike many theories, it was made to fit facts observed. If I might be allowed an opinion in the matter I should say it is fact without any theory. Now for the case.

A man, 70 years of age, suffered from intestinal obstruction and had colotomy performed under ether. The operation itself was perfect. Before operation he was given one-tenth of a grain of strychnine hypodermically and soon after the operation was completed another one-tenth of a grain was administered in the same manner. Later at intervals he had one-twentieth of a grain on three separate occasions as was considered necessary to make the pulse "buck up." From first to last he had seven-twentieths of a grain of strychnine hydrochloride, or equal to 35 minims of the pharmacopœial solution. When the effects of the ether had quite passed off then little by little began the train of symptoms which I enumerated in my last letter. First there was twitching, then great irritability of the reflexes, next clonic and tonic spasms of the vital reflexes, till when toxicity was fully developed the nurse told me, without any prompting, that she was afraid to walk across the room for fear of starting the spasm of the respiratory muscles. For hours before the patient died it was impossible to get him to swallow anything, the least attempt in that direction being enough to induce a series of clonic spasms followed by a long tonic spasm, and I had to give large doses of chloral by the rectum to combat the strychnine action.

Potent drugs can be given in much larger amount than the authorised dose, but if we go right up to the maximum of safety, as is now being done with strychnine, here and there disasters will occur. I write in no mood of carping criticism, for with every honest endeavour to fight death I am in hearty accord, but where I believe the bounds of safety have been transgressed I feel it my duty to protest, and I think that my experience as given above justifies the stand I now take.

I am, Sirs, yours faithfully,

Leeds, May 10th, 1902. GORDON SHARP.

To the Editors of THE LANCET.

SIRS,—As house surgeon in a large provincial hospital where a great number of severe operations are performed I have had many opportunities of watching the after-effects of large doses of strychnine administered on the operating table. Varying amounts from 10 to 60 minims are frequently injected hypodermically when the patient has much shock. In most cases no ill-effects are to be detected but in a considerable number I have noticed involuntary painful muscular spasms a few hours afterwards which have been relieved by the hypodermic injection of morphia. The largest dose given without any after-symptoms was 30 minims during an operation for perforated gastric ulcer, the patient recovering. The largest dose given that produced slight spasms was 60 minims, also in a case of gastric perforation. The patient died five days later. The smallest dose given with spasms following was 26 minims to a girl 16 years of age with general peritonitis from a sloughing appendix who died the day following the operation. I am inclined to think that toxic symptoms are more likely to follow when ether has been the anæsthetic than when chloroform has been given.

I am, Sirs, yours faithfully,

F. BOLTON CARTER, F.R.C.S. Eng.

The Infirmary, Leicester, May 12th, 1902.

To the Editors of THE LANCET.

SIRS,—I should like to add my testimony to that of Dr. J. Gordon Sharp that in an operative case where strychnine had been injected hypodermically the tonic and clonic spasms of the muscles of the extremities remained after the effects of the anæsthetic had passed off, and, indeed, until the death of the patient nearly a week after, and caused a great deal of suffering. I am, Sirs, yours faithfully,

Leeds. JOHN J. PICKLES, M.R.C.S. Eng., &c.

THE GERMAN CONGRESS OF INTERNAL MEDICINE.

(FROM OUR BERLIN CORRESPONDENT.)

THE twentieth German Congress of Internal Medicine met this year at Wiesbaden, Professor NAUNYN of Strassburg being in the chair. The members on their arrival were, as usual, welcomed by the local authorities and by representatives of the medical profession. Professor von Leyden, the founder of the Congress, whose seventieth birthday has just been celebrated in Berlin with much enthusiasm, was then elected an honorary member of the Congress and the chairman took the opportunity of paying a tribute to his great merits as a clinical observer, a man of science, and a practical physician. In his reply Professor VON LEYDEN said that he, together with several other physicians, founded the Congress because it seemed as if internal medicine was falling behind other branches of medicine, especially in view of the surprising progress made by surgery and gynæcology. The Congress of Internal Medicine, the Berlin Society of Internal Medicine, and the *Journal of Internal Medicine* were intended to uphold and to maintain the position of this department of medical science. It was then announced by the mayor of Wiesbaden that the municipal authorities had conferred the freedom of the city upon Professor von Leyden, who was thereupon formally presented with the document certifying his election.

Gastric Ulcer.

Professor EWALD (Berlin) said that gastric ulcer was more frequent in women than in men and was usually met with in persons between 20 and 30 years of age. Cancer originating in a gastric ulcer has been known to occur in a youth, 16 years of age, but such cases were rare. In gastric ulcer some authorities objected to the employment of tubes for the purpose of obtaining samples of ingested food in order that they might be submitted to examination, but tubes might be employed if hæmorrhage had not occurred recently. As to the amount of hydrochloric

acid, Professor Ewald said that it might be either normal or increased or diminished and an excess of hydrochloric acid was therefore by no means characteristic of gastric ulcer, whilst lactic acid was often absent. It followed from this that the chemical examination of the contents of the stomach did not contribute much to the diagnosis of the disease. Hæmatemesis occurred in 54 per cent. of the cases; this symptom was, however, present in other diseases also, such as uræmia, cirrhosis of the liver, septic diseases, and in so-called vicarious menstruation. It was not possible to localise an ulcer of the stomach although the pylorus was known to be affected in the majority of cases. Speaking of the complications of gastric ulcer he said that hour-glass contraction of the stomach might be ascertained by direct inspection with the gastroscope, but no satisfactory form of this instrument had yet been made. Perforation of the ulcer into the abdominal cavity was attended by symptoms so characteristic that the diagnosis was very easy, but perigastric adhesions were difficult to recognise. In a good many cases the diagnosis was uncertain. Patients suffering from chlorosis, the early stage of tuberculosis, gall-stones, cancer of the gall-bladder, and gastric troubles connected with tabes were often supposed to be the subjects of gastric ulcer.

Professor FLEINER (Heidelberg) gave some account of what had been done by early observers of gastric ulcer, stating that it was known to Hippocrates whose dietetic prescriptions were judicious. He further mentioned the researches of Cruveilhier, Trousseau, Brinton, Leube, and Kussmaul. Treatment, he said, aimed at obtaining cicatrisation of the ulcer, and this might be accomplished by means of rest, adequate food, and appropriate medicines, especially salts of bismuth. The patient should eat as little as possible and in the beginning of the treatment should have only ice to suck, whilst milk was to be given by the rectum. No other food than milk should be allowed for four weeks; meat and vegetables might then be given, but fruits, acids, meat extracts, and other gastric irritants were to be prohibited. For convalescents a visit to the country was preferable to a course of treatment at a mineral spa. Relapses sometimes happened, especially when the patient had not been confined to bed for a sufficient time. In these cases irrigation of the stomach with a solution containing bismuth was the best treatment, for the bismuth often adhered to the floor of the ulcer and had been found there after the lapse of several days. The compound of bismuth protected the ulcer against irritation; it was also a disinfecting agent and promoted healthy granulation. Professor Fleiner had treated 500 cases of gastric ulcer without any death. Surgical aid was advisable, especially in stricture of the pylorus, and should be resorted to at an early period before cachexia developed. Gastro-enterostomy was the operation which gave the best results. In profuse hæmorrhage operations were, as a rule, useless.

In the discussion Professor LEO (Bonn) said that he was opposed to the use of tubes because they irritated the ulcer.

Dr. PARISER (Homburg) drew attention to erosions of the stomach, a condition which ought to be distinguished from gastric ulcer proper.

Professor SAHLI (Berne) expressed the opinion that in gastric ulcer operative interference should be avoided as much as possible, for the great majority of these ulcers healed under internal treatment.

Dr. ADOLPH SCHMIDT (Bonn) discussed the genesis of gastric ulcers. He had discovered by experiments on animals that in lesions of the mucosa the contractility of the muscular coat was increased so that the edges of the wound were brought together, but in chlorosis the contractility of the muscular coat was diminished so that the lesion was left open and was liable to be attacked by the gastric juice.

Dr. HIRSCHFELD (Berlin) said that the development of cancer in a cicatrised gastric ulcer was less frequent than was generally believed.

The Parasites of Cancer.

Professor VON LEYDEN (Berlin) said that the increase of cancer in Germany and England had induced a great many observers to study its etiology. He then discussed the various themes of Cohnheim, Hausemann, and Ribbert. Cancer from an anatomical point of view consisted in a proliferation of epithelial cells together with a destruction of all the other cells. The exciting cause of this proliferation had not yet been discovered. Various parasites had been credited with possessing this power, but none of these hypotheses had stood the test of further investigation, so that any new discovery in that direction was received with some distrust. Very likely the parasites of cancer lived within the cells. Ribbert had asserted that a parasite living in a cell would destroy it but would not produce proliferation. This view, however, could be disproved by botanical analogies. There was sometimes in cabbage a growth very similar to cancer and known as "kohlhernie," in which plasmodia had been discovered by Dr. Woronin, a Russian *savant*. These plasmodia grew within the cells and produced first a proliferation and then a destruction of them. The anæmia and the alterations of the urine which occurred in cancer must be taken as symptoms of a general infection. Moreover, cancer had been communicated experimentally from one animal to another, of course of the same species. Professor von Leyden also mentioned a case where by accident a student had drunk a fluid consisting of the gastric juice of a patient suffering from cancer of the stomach, the result being his death from cancer within two years. He then described plasmodia which were found within the proliferated cells in cancer, especially in fresh specimens, and were very like those discovered by Dr. Woronin; the plasma of the cells appeared as if destroyed by the parasites. Professor von Leyden recently discovered masses of these corpuscles in capsules which were supposed to be sporangia. Similar masses had also been met with in a case of cancer of the lungs.

(To be continued.)

THE NICE HOSPITALS AND THE VICTORIA MEMORIAL.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

A Proposed Cottage Hospital for English-speaking Patients at Nice.—The Difficulty of Dealing with Infectious Cases in Hotels.—The War Department and the Municipal Hospital.

THE prevalence of small-pox on the Riviera has greatly stimulated the efforts of all who had already endeavoured to improve the hospital accommodation. At Nice especially there has been quite an agitation among the American and British visitors and residents in favour of building a cottage hospital. Some time ago the newly appointed British Consul at Nice, Mr. Alec McMillan, proposed that a memorial should be established at Nice in honour of the late Queen Victoria. Of course there was a clergyman who suggested that the memorial should take the form of a stained-glass window for the beautification of his church. The British residents and their American friends displayed, however, a more practical turn of mind. They warmly supported the proposal of Dr. A. W. Gilchrist who argued that a cottage hospital would be of far greater service than a stained-glass window, particularly as there is no hospital with modern requisites in the town. A public meeting of American and British residents and visitors was held on March 16th last. In the course of a lengthy and interesting speech delivered on this occasion Dr. Gilchrist related the pathetic case of an English lady who was seized with a serious illness last year. She had been refused admittance to the Asile Evangélique and was removed to the Hôpital de la Croix. "You know," said Dr. Gilchrist, "the pitiful circumstances of her death. In the middle of the night, amidst the gloom and desolation which befit the antiquated institution that gave her refuge, she drew her last breath, not only deprived of those subtle influences which can rob even death of some of its terrors, but without the possibility of expressing her last wishes to anyone of her own tongue." Then another case was described of a lady who was eligible for admission into the Asile Evangélique, but this patient required the care of an experienced surgeon not available at the Asile, where the insanitary surroundings and restricted space render it unwise to attempt major surgical operations. Her end was hastened because there was no suitable hospital where she would have received the constant attendance and skilled nursing which she needed. In many such cases English-speaking medical men and trained nurses are absolutely necessary. Another instance given was that of a young lady of French parents but born and bred in England. Though endowed with an exceptionally fine physique she had to undergo an operation rendered necessary through insufficient care during childbirth. There was nothing particularly serious or dangerous about this case; but being a Roman Catholic she could not enter the Asile Evangélique, and therefore she went to the General Hospital, where she died from

blood-poisoning. There are many other such accidents on record, and the French as well as the practitioners have often complained about the unsuitable and insanitary conditions of the General Hospital.

The Asile Evangélique is more suited for a convalescent home. There are no proper provisions for serious surgical operations, no lying-in ward, no isolation pavilion for infectious cases, and it is only available for Protestants and members of the Orthodox Greek Church; Roman Catholics and Jews are not admitted. It therefore in no wise meets the most urgent requirements. What is wanted is a cottage hospital, or rather several cottage hospitals, where English-speaking patients, without any distinction of creed, can be treated under the best and most modern sanitary conditions by English-speaking medical attendants and fully-trained nurses. There should be a well-equipped operating-room, a surgical ward, a medical ward, a lying-in ward, and an isolated pavilion for infectious cases. Some of the beds, and these would constitute the Victoria Memorial, should be gratuitous; the others should be for paying patients attended by their own physicians. Of the latter there would be a considerable number, for in any serious case of illness it is obvious that many persons would prefer such a hospital to remaining in an hotel. They would also have a better chance of recovery. In regard to infectious diseases the need of such an institution is still more obvious, for there can be no doubt that the infectious fever cases and small-pox should not be treated at an hotel. The hotel-keepers are in considerable perplexity when such cases occur. If they compel the patient to leave they may be accused of inhumanity and may become unpopular among their customers. If they keep the patient the customers may take fright and leave the hotel. Under these circumstances many hotel keepers are willing to subscribe to the proposed cottage hospital. Cases have occurred where well-to-do patients have died in an outhouse, a shanty, or an abandoned workshop because there was no room to isolate them in their hotel. Of the six cases of small-pox which occurred this season among the British and American visitors one of the patients lived in a large tenement house. He was nursed by his brother and sister who were to be seen daily riding in the trams. Other tenants dwelling in the same house wanted to get away but having hired apartments for the season could not do so. It may be said that this patient could have been removed to the hospital of La Croix where infectious cases are taken in and where private rooms can be hired. But it is an antiquated institution devoid of modern requirements and there are only untrained Italian sisters who sometimes render themselves objectionable to Protestants.

Considering that the welfare of Nice depends largely on its foreign visitors and that the fear of small-pox has kept many of them away during the recent winter season the question naturally arises why the municipality has not taken active steps to provide proper accommodation, at least for the isolation of cases of infectious fever or small-pox. The better to answer this obvious question I called on the Mayor of Nice. The present Mayor, M. Sauvan, has not been very long in office, but from gossip in medical circles I had already ascertained that he had manifested more than usual interest in all matters relating to the public health, and hopes are entertained that under his administration more rapid progress will be achieved. In any case M. Sauvan received me most courteously and was ready to supply the information I made bold to demand. He insisted that the grievance in regard to the condition of the hospitals had been a subject of anxiety to the municipality for a long time and many efforts at reform had been made. Unfortunately until recently the municipality was not master of the situation. It had a partner, and a very obstructive partner, in the person of the Minister of War. This is a difficulty which certainly would never occur to the mind of a British or American visitor when tempted to criticise the municipal deficiencies of Nice. We cannot conceive a British or American municipality being debarred from providing proper hospital accommodation by the action of the War Office, and this, too, in the piping times of peace. But the fact is that the General Hospital of Nice is a military as well as a civil hospital. Now the War Department is not in the least concerned about the welfare of Nice as a fashionable winter resort. The military authorities were satisfied with the hospital as it stood and were not going to trouble themselves about alterations. Negotiations were opened by the municipality with the War Office, plans were proposed and schemes devised, but the military authorities invariably put spokes in the wheels whenever the civil authorities tried to move in the matter and this caused endless delay. A solution of the difficulty has, however, at last been found. A contract has been signed by which the municipality takes over the entire management of the hospital. It will be able to select a new site and to build a new hospital without having to consult and to obtain the approbation of the War Office. On the other hand, the municipality undertakes to receive in its hospital all soldiers who are ill in exchange for a fixed payment per head per day from the War Office. Already it has been decided to abandon the present hospital and to build according to modern principles and on the pavilion system a large hospital some four or five miles away from the centre of the town. There will be no financial difficulty in the accomplishment of this much-needed reform. Nice is the most prosperous of the large towns of France. Its population now numbers 127,000 inhabitants and has increased to the extent of 20,000 during the last five years. The mayor thinks that the new hospital will take some two or three years to build and therefore he insisted that the solution of the difficulty which I had exposed was now in sight. In regard to infectious cases there will, of course, be one or more pavilions separated from the rest of the hospital and reserved exclusively for isolation purposes. In response to this explanation I ventured to suggest that as the land had not yet been bought it would be preferable to secure two different sites well apart from each other. There was no advantage—there might be some danger—in having both hospitals in the same grounds; they could not be kept too far apart. The mayor graciously promised that good note would be taken of this observation.

Of course, it is still too soon to say how far the building of this new municipal hospital will lessen the need of a cottage hospital for English-speaking patients. For the latter purpose £1500 have been collected. Hopes are entertained that £10,000 will be obtained and it is proposed to make a start as soon as £4000 are in hand. If these hopes are confirmed something may be done long before the new municipal hospital will be built. Also the new general hospital, however perfect it may be, will not meet the requirements of the British and American residents who want the attendance of fully trained English nurses and English-speaking medical practitioners. There might, however, be some arrangement made for an English ward at the general hospital and this might cost less than a separate hospital for English-speaking patients.

In the meantime, and whatever may be the value of these suggestions, it is most urgently necessary that better means for treating and isolating cases of small-pox and infectious fevers should be provided. Even if such accommodation be of but a provisional character, it should be forthcoming before the opening of the next winter season.

Nice, April.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Opening of the New Hartley Botanical Laboratories at University College.

THE magnificently-equipped botanical laboratories presented to University College, Liverpool, by Mr. W. P. Hartley were opened on May 10th, when Mr. Hartley formally presented the buildings to the college authorities. In place of the customary ceremonial opening there was a presentation to Mr. Hartley of a gold key, and a similar memento was presented to Sir William Thiselton-Dyer, K.C.M.G., the director of Kew Gardens, in recognition of the address on the Study of Botany with which he favoured the large audience who assembled in the arts theatre of the college to witness the proceedings. The gathering was presided over by Mr. E. K. Muspratt and included Professor Marshall Ward (Cambridge University), Professor B. Farmer (Royal College of Science), Professor Weiss (Owens College, Manchester), Professor Potter (Durham University), Professor Bottomley and Professor Millar Thomson (King's College), Professor Smith (Yorkshire College), Sir John T. Brunner, Principal Dale (University College, Liverpool), and a number of the college staff. Mr. Hartley, on making the presentation, said that his object in providing the laboratories was to help in the discovery of truth and in the encouragement of science in its pure as well as in its applied branches—knowledge which not simply made their wealth more and their comfort greater, but which improved the mind and

developed higher faculties and functions. Sir William Thiselton-Dyer, prefacing his address on botany, said that his feeling in coming to Liverpool from London was one of envy. He found a great commercial city full of busy life, possessing buildings and equipments for the pursuit of knowledge marked by a sumptuousness and magnificence the like of which was not possessed by them in London and there was no early probability of their possessing them. As had been indicated, the new laboratories were not intended to teach that which would lead to any direct profit or which would be utilitarian in effect. Botany was calculated to foster the faculties of carefulness and observation in the highest stage; the direct appeal to nature went down to the very simplest needs of ourselves. Bluntness of observation was a terrible thing, for the inability to see a thing at the moment it was there might mean the loss of a great and unique opportunity. The great Darwinian theory, one of the most startling ever sprung upon the the scientific world, sprang from Darwin's observation of the difference between the plants on two neighbouring small islands. The cultivation of the powers of observation was a valuable occupation, and botanists who had been trained in that way would always find the seeing eye of use. Sir William Thiselton-Dyer spoke of the great industries which had their origin in botanical discoveries and also of the value of the science to medicine, concluding with the remark that after the first 36 hours of our existence we were dependent on plant life until our death, and then it facilitated our decay. Professor Harvey Gibson, the lecturer in botany at University College, Liverpool, in seconding the vote of thanks which was proposed by Sir John Brunner, described the new laboratories as some of the greatest in the kingdom. They were designed to unite in the study of botany the scientific and commercial and economical aspects. Great problems were connected with the production of rubber, the preservation of fruits, and the treating of grain, and why should not these be solved in the Hartley laboratories?

May 13th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal College of Physicians of Edinburgh.

A QUARTERLY meeting of the Royal College of Physicians of Edinburgh was held on May 6th, Dr. T. R. Fraser, the President, being in the chair. Mr. Dugald Christie of Moukden, Manchuria, was admitted by ballot to the Fellowship of the College. On a ballot Dr. Charles Mowbray Pearson was admitted to the Membership of the College after examination. The Registrar reported that since the last quarterly meeting 50 candidates had obtained the Licence of the College by examination. The Hill-Pattison Bursary, which is in the gift of the College, was awarded after a competitive examination in anatomy and physiology to Mr. James Grieve Cormac. Dr. William Fordyce was recognised as a Lecturer in Midwifery and Dr. Charles J. Lewis as a Lecturer in Public Health. Sir John Batty Tuke was unanimously re-elected Representative of the College on the General Medical Council for a period of five years from May 4th. The Secretary announced the re-election by the Council of Sir John Sibbald as Representative on the Conjoint Committee of Management of the Triple Qualification. On a motion by the Secretary it was resolved—

That Law 2 of Chapter VI. be altered so as to read as follows: "The fee to be paid by a Member shall be 35 guineas."

That Law 3 of Chapter VI. be altered so as to read as follows: "When a Licentiate shall be raised to the rank of Member he shall pay 25 guineas."

That Law 4 of Chapter VI. be altered so as to read as follows: "When a Member shall be raised to the rank of Fellow he shall pay 38 guineas, exclusive of Stamp Duty."

Prevention of Spitting in Edinburgh.

At a meeting of the Edinburgh Public Health Committee on May 6th the committee agreed to recommend to the town council that 250 metal plates bearing notices asking the citizens not to spit on the pavement should be affixed to the electric lamp-posts throughout the city.

Edinburgh New Fever Hospital.

The Public Health Committee of the Edinburgh Town Council has recently approved of plans and provisional estimates submitted by the head city gardener and the city road surveyor for laying out the grounds and forming roads in connexion with the new fever hospital at Colinton Mains. The grounds are to be laid out so as to provide sufficient recreation space together with efficient isolation for each pavilion and at the same time to enhance the appearance of the group of buildings as seen from a distance. The cost is estimated at £4750, while the roads will cost an additional £4800. The Public Health Committee agreed to recommend to the town council that the roads should be proceeded with at once.

The Investigation of Cancer.

Mr. J. K. Caird, who three years ago provided, at a cost of over £8000, the Dundee Royal Infirmary with the wards and nurses' home in connexion with its gynæcological and maternity departments, last week offered to build an addition to the hospital to be devoted specially to the treatment of patients suffering from cancer, and also to defray the expense of a five years' research in the subject. The proposed building is intentionally very large, as it is Mr. Caird's desire that part should be used for general purposes if the whole is not required for cancer cases. The number of beds shown on the plans is 114 and the estimated cost is £18,500. The sum to be given for research purposes is £5000.

May 13th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Notification of Infectious Diseases in County Dublin.

IT is now more than a month since the Commissioners Blackrock adopted the provisions of the Notification of Infectious Diseases Act, and now, with the exception of King-town, every local body between Dublin and Waterford has followed the same course. At the last meeting of the Dublin Sanitary Association held on May 8th the following motion was unanimously adopted:—

That the council of the Dublin Sanitary Association observe with disappointment and dismay that the Urban District Council of Kingstown has postponed the question of the adoption of the Infectious Diseases (Notification) Act, 1889, for the long period of 12 months. The council consider that in taking so grave a step the urban district council has lost sight of the interests of the important health resort intrusted to its care and has incurred a serious responsibility. Should epidemic disease break out in Kingstown it will probably spread far and wide before its presence is brought under public notice, tourist traffic will be interfered with, while Dublin and the other adjoining districts, which have now, without exception, adopted the Act will be endangered. The council trust that an effort will yet be made to rescind so unfortunate a decision at the earliest opportunity and that Kingstown will fall into line with the neighbouring districts.

The Royal City of Dublin Hospital.

The "Gigas" bazaar and fête in connexion with the Royal City of Dublin Hospital was opened on May 13th by His Excellency the Lord Lieutenant of Ireland and the Countess Cadogan. They were received by the Earl of Pembroke as representing the committee. The Lord Mayor of Dublin was present and proposed a vote of thanks to His Excellency, who in his reply spoke of the pleasure he felt in meeting the Lord Mayor on a platform where all could unite in the cause of charity.

Royal University of Ireland.

A meeting of Convocation of the Royal University of Ireland was held in Dublin on May 9th to elect six members to represent Convocation on the Senate, and such was the interest taken in the contest that 573 voting papers were handed in. There were nine candidates and the following six were elected:—His Honour Judge Shaw, LL.D., 396 votes; Mr. A. Anderson, M.A., President of Queen's College, Galway, 366 votes; Mr. J. Walton Browne, M.D., 360 votes; Professor T. Sinclair, M.D., 360 votes; the Rev. Professor Leitch, D.Lit., 334 votes; and Mr. E. Cuming, M.A., K.C., 322 votes. The issue upon which this election was fought was the question of the employment of extern examiners in the University. The six senators elected were in favour of extern examiners in the various faculties of the University, but especially in the faculty of medicine, and the Royal University Graduates' Association supported and recommended their candidature. The highest on the poll of the rejected candidates, Sir W. Thomson, C.B., has long been an active member not only of the Senate of the Royal University, but also of its Standing Committee. In his election address he defined an extern examiner as one not officially connected with any of the three Queen's Colleges (Cork, Galway, and Belfast) or with the Catholic School of Medicine, and no doubt he had the authority of a resolution of the Senat in support of this view. But, as was pointed out in the press by the secretary of the Graduates' Association, such a

definition would not prevent persons engaged in teaching students of the Royal University in the Dublin hospitals from applying for examinerships, or hinder them if they got such posts from examining their pupils on the subjects that they had taught them. This state of things would not meet the requirements of the Graduates' Association, the members of which believed that in the interests of justice and of fairplay to provincial students the extern examiner, properly so called, should not "be connected in any capacity with any school, college, or university in Ireland." Sir W. Thomson regarded such a demand as a betrayal of Irish interests and an insult to Irishmen, and he protested in his address "against the implication that in order to obtain competent, honest, and impartial examiners we must go to England or Scotland and thus offensively exclude our own countrymen." This was an admirable card to play in an election address, but it failed, and the graduates have by their course of action in this election shown that what is wanted is not a multiplication of examiners but an addition of extern examiners not "connected with any school, college, or university in Ireland." The Royal University Graduates' Association is simply following the precedent set by other universities.

The Weather in the North of Ireland.

There has not been for many years such severe weather as that which has prevailed in the North of Ireland during the present month, which has been cold with a keen, withering north wind accompanied with hail.

May 13th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Precautions against Accidental Poisoning in Hospitals.

IT will be remembered[1] that last year a deplorable accident occurred at the Hôpital Lariboisière owing to the mistake of a nurse who gave several patients a poisonous substance in place of what had been ordered for them. With a view to guard against the recurrence of such dangers M. Mourier, director of the Assistance Publique, has decided that henceforth all poisonous substances employed in the hospitals shall be kept in special receptacles impossible to be mistaken for the ordinary receptacles containing non-poisonous substances. The new receptacles are going to be tried at the hospital where the accident occurred. For amounts of from 15 grammes to one litre (from half an ounce to 35 ounces) the receptacles are glass bottles and for amounts of more than one litre they are earthenware jars. Both the bottles and the jars are triangular, a shape which can be distinguished at the first glance from the ordinary cylindrical form. The triangular bottles will be made of yellow glass roughened on two surfaces in a manner perceptible to the touch, so that by their shape, their colour, and their roughness the bottles will appeal alike to the sense of sight and the sense of touch and mistakes will be absolutely impossible either in the light or in darkness. When the success of the new system is proved it can be extended to other hospitals and adopted generally.

Examinations in Medicine and Pharmacy.

Until recently, when a candidate had failed to pass an examination in medicine or pharmacy he had the right of again presenting himself in three months, and in the event of a second failure again in three months, and so on continually. This system was, however, altered by a decree promulgated on July 24th, 1899. From that date, if a young man failed to pass the first time that he presented himself he had the right of presenting himself again in three months, but in the event of a second failure he would have to wait not for three months but for six months before again coming forward, and in the event of a third failure he would have to wait for 12 months. This is evidently a serious hindrance to the completion of medical studies, for with this prospect of possible failures it becomes difficult to foresee at what date a student might hope to be able to finish his curriculum. Students have therefore commenced an agitation which they are actively carrying on in defence of their interests, and at the end of last February they protested in large numbers against the application of this decree, which could only have for its object the elimination of idle or incompetent students.

[1] THE LANCET, April 20th (p. 1174) and Dec. 14th (p. 1704), 1901.

Motor Ambulance Vehicles.

Complaints have several times been made with respect to the slowness of the ambulance vehicles belonging to the city, for they are drawn by only one horse which is not always a very fast goer. The question of the speedy arrival of the vehicle at the scene of an accident being of the first importance it would at least be desirable for it to have two horses. Another thing is that the harnessing of the horses takes time. It would be very much quicker and more practical to use motor vehicles now that they are sufficiently speedy and trustworthy. For the daily removals of military patients special tramcars are used but even these are far from being perfect. The idea of letting them run on the tramway lines is an excellent one, for it makes the journeys both easier and quicker, but it is a mistake to use old vehicles and it would be a good thing if the military tramcars which are no longer serviceable were sent back to the car-builders, for those which are at present running in Paris have a deplorable appearance and this service is in several respects open to improvements.

May 13th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Proposed Increase of the Medical Corps of the United States Navy.

SURGEON-GENERAL RIXEY, the head of the Medical Service of the United States Navy, who has recently been appointed to that position, has recommended, as one of his first official acts, that the medical corps of the navy should be increased by 40 medical officers, this increase to be made by the addition of 15 surgeons and 25 assistant surgeons. Owing to the increase in the size of the navy, the larger number of ships in commission, and the great amount of time lost by medical officers in changing station between the United States and the Philippines and other outlying stations, Surgeon-General Rixey finds considerable difficulty in furnishing proper medical attendance to the ships. He is of opinion that the addition should affect the higher as well as the lower grades, and points out that the senior passed assistant surgeon has been in the service for 12 years. The surgeon-general's recommendation has been approved by the Secretary of the Navy and forwarded by him to Congress, with the suggestion that the necessary legislation should be enacted.

Tuberculosis in Cattle.

A series of experiments extending over more than a year has just been completed at the Storrs State Agricultural College, Connecticut, by Professor H. W. Conn, having as their object an inquiry into the accuracy of the statements made by Professor Koch in regard to the relation of bovine tuberculosis to that of man and its effect on the dairy herd. His investigations go to prove that the danger of the spread of tuberculosis among human beings through the milk of diseased animals has been exaggerated and that in the earlier stages of the disease when the udder is unaffected the risk from the use of the milk appears to be limited. He, however, points out that it is impossible for the farmer to tell accurately when the udder has become affected, so that, as the only method of freeing herds of cows from the great danger which menaces them is by the segregation of every animal upon which tuberculin reacts, this precautionary measure should be invariably followed.

Modified Quarantine and Yellow Fever.

Dr. Alvah H. Doty, health officer of the Port of New York, is about to discuss with Federal officials the subject of quarantine regulations, especially as they bear upon yellow fever coming into New York. He will advise that the Government shall do all in its power to bring about a conference of leading sanitarians who have had experience of yellow fever, and he looks forward to a modification of the existing quarantine regulations. Dr. Doty holds that as the mosquito is the only known medium of infection the present quarantine regulations in force in New York Harbour are both troublesome and unnecessary, and he maintains that when a ship upon which yellow fever has manifested itself is more than five days from the port of departure removal of those infected removes the fever from the ship, provided there are no yellow-fever-bearing mosquitoes aboard. Dr. Doty made the following remarks in an address before the American Public Health Association dealing with this matter:—"Dr.

Reed's experiments have not conclusively shown that there may not be some other means than the mosquito by which yellow fever is transmitted. But when these experiments are considered in connexion with the results of our practical experience it is clearly evident that this disease is not contracted by personal contagion or through the medium of clothing, bedding, cargoes of vessels, &c. Therefore I believe we are justified in changing our quarantine regulations to conform to these views, and that such a proceeding is safe and reasonable, particularly as we now have at hand a method which if properly and scientifically carried out, can be depended upon to limit the extension of yellow fever. If the future shows that there are other means of infection it will then be time enough to add whatever restrictions are necessary for the protection of the public health."

Mosquitoes and Dengue.

The *New York Medical Record* of Feb. 8th contained an article on Dengue by Dr. Harris Graham, professor of pathology in the American College, Beyrout, Syria. This article was referred to in THE LANCET of March 22nd at page 855. Dr. Graham made a careful study of, and investigations into, the mode of propagation and the pathology of the disease, and as a result of these researches he claimed that it was caused by a protozoal parasite, and stated that his experiments had convinced him that dengue was conveyed to man by means of a mosquito, apparently of the culex species, which, as in malaria, acted as the intermediary host. The Bureau of the United States Marine Hospital Service having had its attention drawn to Dr. Graham's article has determined to make investigations with the object of testing the value of his conclusions, and has requested that health officers in all parts of the United States will furnish the Surgeon-General of the Marine Hospital Service with early information as to the appearance of dengue in epidemic form in their respective localities, in order that investigators may be early dispatched to the seats of such epidemics.

May 6th, 1902.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Plague.

THE bubonic plague has recurred in Australia, with a varying virulence in the different States. In Sydney it has been very severe, over 80 cases having occurred, with about the average mortality of the previous epidemic—viz., one in three. Two popular actresses were among those who died, and this fact led to Her Majesty's Theatre being closed for a time and quarantined. In Melbourne only one case, non-fatal, has occurred so far. In Brisbane several cases have been notified. A supposed case was isolated at Adelaide but the diagnosis proved to be erroneous. No cases have been reported from West Australia. As regards Sydney the fresh outbreak began gradually. For 15 months the disease was quiescent and it reappeared on Nov. 14th, 1901. Up to Feb. 20th, 1902, 22 cases occurred at varying intervals, from 36 days to one day, and in six different areas. In some areas the nature and source of infection could not be traced; in others a definite local infection from rats was fairly clear. Four produce stores were implicated in the outbreak. The cases afterwards increased in number with few and short intervals. One infected area was largely occupied by Chinese and was highly insanitary. The destruction of rats and cleansing operations are being vigorously prosecuted in all the States. It is difficult to conceive, however, how indifferent the various municipal authorities are to sanitary matters. In Melbourne, for instance, the garbage and refuse are still disposed of in "tips" which are most obnoxious. The corporation imported a destructor which could deal with only about one-fifth of the refuse, but it is not used, it is said, because of the cost. In Sydney recent inspections showed that parts of the city which had been demolished during the first outbreak of plague had been rebuilt in exactly the same insanitary manner and under the very eyes of the municipal authorities.

The Health of Sydney.

The medical adviser to the Metropolitan Board of Water-supply and Sewerage, Sydney (Mr. T. M. Kendall), has furnished his annual report. It stated that the board supplied water to 511,382 persons, of whom only 364,775 were accommodated with a sewerage system. The mortality from general causes exceeded that for 1900. The mortality from diarrhœa and typhoid fever was lower and that from diphtheria and phthisis was higher. An investigation of 874 cases of typhoid fever reported showed that 31·2 per cent. came from districts unprovided with sewerage, 28·6 per cent. from dwellings unconnected with sewers, 24·3 per cent. from dwellings in which the sanitary fittings were defective, and 15 per cent. from dwellings in which the board's regulations had been complied with. The installation of the sewerage system had undoubtedly diminished the prevalence of typhoid fever. The mortality from this disease before and after the laying down of the sewers had been as follows in the districts named: city of Sydney, before 5·07, after 1·07; Glebe, before 2·5, after 1·8; Darlington, before 4·0, after 0·3; Newtown, before 6·6, after 1·8; Redfern, before 3·6, after 1·0; Waterloo, before 1·2, after 0·9; Paddington, before 2·7, after 0·9; Woollahra, before 2·1, after 0·8.

Hospital Affairs.

The difficulty at the Women's Hospital, Melbourne, to which reference has been previously made, remains unsettled. The resident staff was dismissed and when applications for the positions were invited the two late residents were the only applicants. The committee refused to re-appoint them and Dr. Andrew Shields, formerly Government medical officer, offered his services temporarily and was appointed. The committee now invites applications from men who have been three years at least in practice and offers a salary of £250 per annum.—The report read at the annual meeting of the supporters of the Sydney Women's Hospital showed that 299 in-patients and 1493 out-door patients had been treated. The financial position was satisfactory. The directors intimated that as soon as the new maternity hospital in course of erection was completed the Women's Hospital would be amalgamated with it.—The twenty-second annual report of the Sydney Hospital for Sick Children stated that 536 in-patients had been treated. Of this number 314 were discharged cured, 72 were relieved, 46 were discharged unrelieved, 60 died, and on Dec. 31st there were 44 remaining in the hospital. In the diphtheria cottage there had been admitted 197, making, with five remaining from the previous year, a total of 202 patients under treatment. Of these 155 were discharged cured, 36 died, and on Dec. 31st there were 11 remaining in the wards. In moving the adoption of the report the Premier drew attention to the very large amount of money spent by the State in assisting hospitals. Last year the Government grant to various hospitals amounted to £227,000, and he deemed that the community did more than any other country in the world in supporting charitable institutions. The Government had also granted a very fine site for a new children's hospital and had undertaken to drain it. It overlooked Centennial Park, Moore Park, and Botany Bay and could not be built out.—The annual report of the Prince Alfred Hospital, Sydney, stated that the statistics of the first year's work were as follows:—Remaining in hospital on Dec. 31st, 1900, 223; admitted during the year 1901, 3216; total under treatment, 3439. Of these 1848 patients were cured, 725 were relieved, 268 were unrelieved, 360 died, and 238 remained in hospital on Dec. 31st, 1901. The rate of mortality per cent. (deducting 61 deaths which occurred within 24 hours of admission) was 9·29.—The annual report of the Sydney Hospital showed that the patients remaining in hospital on Dec. 31st, 1900, numbered 286; patients admitted during 1901, 3951. Total under treatment, 4237. Discharged cured, 2467; relieved, 873; unrelieved, 165; died, 428; remaining in hospital on Dec. 31st, 1901, 304; percentage of mortality on admissions, 10·9. Improvements had been effected in the buildings by the erection of the Nightingale wing and operating theatre—now equal to anything in the southern hemisphere. The Government had voted an additional sum of £2500 for further improvements, including the furnishing of the Nightingale ward and a new casualty room. Reference was made to the danger of admitting phthisical patients to the general wards and the efforts made to establish a separate institution for their treatment. The pathological department of the hospital had proved of great use as a help to the diagnosis of cases in the wards. The laboratory of pathological chemistry was now equipped with apparatus which rendered it possible to make use of the more modern discoveries in physiological and pathological chemistry in their application to the improvement of diagnosis, prognosis, and treatment in many cases of disease which were before surrounded by almost impregnable difficulties and fallacies. It was the distinction of the Sydney Hospital to be able to report

that to it belonged the honour of being the pioneer hospital of Australia, perhaps of the southern hemisphere, in introducing modern chemical methods in diseases of the stomach and metabolism generally. In the skiagraphic department a large number of cases had been treated, 263 cases having been submitted to the Roentgen rays.—A new hospital has been established in Sydney called the King Edward Hospital. It is situated at Miller's Point and is specially for seamen. It has been started very quietly and many doubt the need for it seeing that the Prince Alfred Hospital and other hospitals are being enlarged.—The committee of the Melbourne Hospital has appointed delegates to confer with delegates from other hospitals to fix a standard of efficiency for trained nurses and if possible to appoint a conjoint board of examiners and to decide on a recognised system of examination. The committee also decided in future to import all the drugs required direct.

The Profession and the Friendly Societies in New South Wales.

As has been previously mentioned, friction has existed for some time between the friendly societies in New South Wales and their medical officers, or more strictly the New South Wales Branch of the British Medical Association. Matters are rapidly reaching a crisis. At the annual meeting of the Friendly Societies' Association held on March 12th the matter was referred to. The annual report stated :—

During the year under review the attention of this association has been directed by an affiliated society to the action of the British Medical Association in practically boycotting the society referred to. The majority of societies for several years past have enjoyed an uninterrupted career of mutual understanding between the members and the surgeon, but if this new issue, the wage-limit question, is pressed it cannot conduce to the maintenance of the harmony that has hitherto existed. The following notice of motion was referred to a committee to report : "That it is desirable to place before all candidates for State election the question if they favoured the introduction of a measure whereby medical practitioners would be compelled to meet in consultation any duly qualified medical man and regulate fees for attendance and consultations." The committee met and took a quantity of evidence but the State elections being then in full swing it was too late to make any recommendations dealing with the above notice of motion.

The President said further :—

Unless they could make some compromise with the British Medical Association he could not help saying that he foresaw trouble looming in the distance. The question of the wage-earning limit was a serious matter and could not be regarded too lightly by this association. The action of the doctors in his opinion would be to destroy a cosmopolitan character of our societies. They considered no man's financial position any barrier to their membership. That a man with his income of thousands was equally entitled to membership in their orders as a man whose earnings amounts to £200 or less, that being the limit fixed by our worthy friends "the doctors" to admit as financial members of a society. The medical fraternity were doing their utmost to keep out an element which was conducive to the well-being of the society. Very many of the moneyed members, while paying their contributions had not joined for any benefits that they may be entitled to, and the same will apply to the doctors. Very few of such members have enlisted the services of the lodge doctor and he challenged the profession to say otherwise. Their societies were not open to distinction or class. The admission of the rich and the poor was essential to their success, both financially and intellectually. Roughly estimated there were about 70,000 or 80,000 members of various orders in New South Wales and if a central medical board was formed sufficient funds could be raised annually to pay salaries to doctors and distribute them in all parts of the State. Other difficulties such as meeting in consultation could easily be overcome by legislation, but he should be very loth to interfere in the harmony now existing, but would be forced to do so if this wage-earning limit were persisted in.

The matter was discussed by the meeting and it was agreed that the action of the British Medical Association in boycotting the Australian Natives' Association was inimical to the interests of friendly societies and that this resolution should be forwarded to the secretary of the British Medical Association. It was also decided that a special meeting should be held this month to consider the question raised by the doctors. The New South Wales Branch of the British Medical Association also discussed the subject at its last meeting and carried a motion—

That the resolution of August 31st, 1900, declaring the Australian Natives' Association to be a society inimical to the interests of the medical profession, be adhered to.

The Australian Natives' Association is determined to make the question a public one and, according to its secretary, "will fight it to a finish." He observes that at the inception of the Australian Natives' Association the British Medical Association demanded that a wage-limit of £200 per annum should be fixed. After some consideration the wage-limit was conceded and still the British Medical Association boycotted the Australian Natives' Association. At its inception the Australian Natives' Association had only one branch with 32 members ; now it had 35 branches and 2700 members. Out of nearly 1200 medical practitioners registered in the State of New South Wales only 300 are members of the British Medical Association.

Obituary.

Dr. George Goode of Camden, New South Wales, died recently. He was born in Ireland in 1843 and took his M.A. and M.D. degrees at Dublin University. He was for some years in the New Zealand Investigation Service and went to Camden in 1875. After residing there for 10 years he removed to Orange, but after a few years resumed practice at Camden. He was a brother of Dr. J. Goode, of Macquarie-street, Sydney, and was well known and popular with the profession.

April 7th.

Medical News.

UNIVERSITY OF CAMBRIDGE. — The following medical and surgical degrees were conferred on May 8th :—

Bachelor of Medicine.—H. P. Bradley and B. L. Thurlow, Gonville and Caius ; and J. M. Brydone, Jesus.

Bachelor of Surgery.—J. P. Hedley, King's ; G. R. Wilson, Trinity ; A. S. Bradley, G. L. Crimp, G. P. D. Hawker, J. E. B. Snell, and B. L. Thurlow, Gonville and Caius ; J. M. Brydone, Jesus ; F. B. Shipway, Christ's ; H. C. Brown, A. F. Elliott, and H. J. Shone, Emmanuel ; and C. H. Sedgwick, Sidney Sussex.

The Registrary calls the attention of candidates for medical and surgical degrees to the new regulations for the Third Examination for the degree of M.B. which will come into force next term and points out that all such candidates, with the following exceptions, are now subject to those regulations :—

1. Students who have already passed one part of the Third Examination. Students who have passed in surgery and midwifery (old III. M.B., Part I.) are required to satisfy the examiners in section (3) only of the new Part II. (physic). Students who have passed in physic (old III. M.B., Part II.) are required to satisfy the examiners in sections (1) and (2) only of the new Part II. (surgery and midwifery).

2. Students who shall have passed both parts of the Second Examination before October next. These students are still permitted to present the same certificates on admission to Part I. of the Third Examination as would have been required from them on admission to Part I. under the old regulations, and to present the same certificates on admission to any section or sections of Part II. as would have been required from them on admission to Part II. under the old regulations.

Students who have been admitted to, but have not passed, either part of the Third Examination must, either before, after, or together with Part II., pass the new Part I. (pharmacology and general pathology), but they require no new certificates for admission either to this part or to the section or sections of the new Part II. corresponding to the part of the old Third Examination to which they have already been admitted. A special examination in pharmacology and general pathology will be held on June 9th, 1902 ; the ordinary examination for Part I. will be held in December, 1902, and in June and December of future years.

UNIVERSITY OF DURHAM.—At the convocation held on April 26th, the following degrees and diploma were conferred :—

Doctor in Medicine.—Laurence James Blandford, M.B., B.S. Durh. ; Leopold Stanley Davison, M.B., B.S. Durh. ; Richard Henry Dix, M.B., B.S. Durh. ; Henry Adamson Fielden, M.D., B.S. Durh. ; John Reginald Fuller, M.B., B.S. Durh. ; Edward Walter Josselyne, M.B. Durh. ; Eliot Swainston, M.B., B.S. Durh. ; and David Henderson Weir, M.B., B.S. Durh.

Doctor in Medicine for Practitioners of 15 years' standing.—Edward Harris Armitage, M.R.C.S., L.R.C.P., D.P.H. ; Charles William Josceline Bell, M.R.C.S., L.R.C.P. ; Albert Bothay, M.R.C.S., L.R.C.P., L.S.A., D.P.H. ; Edward Joseph Day M.R.C.S., L.S.A. ; Ambrose William Fairles, M.R.C.S. ; Thomas Frederick Gardner, M.R.C.S., M.R.C.P., L.S.A. ; Frederick Charles Goodwin, M.R.C.S., L.R.C.P., D P.H. ; William Gosse, M.R.C.S., L.R.C.P. ; Robert Rankin Hunter, M.B., M.S. Glasg., M.R.C.S. ; Richard John Morris, M.R.C.S., L.R.C.P., L.S.A. ; John Latimer Parke, L.K.Q.C.P. Irel., L.F.P.S. Glasg., L.S.A., D.P.H. ; James Williamson Patrick, L.R.C.P. & S. ; George Frederick Pollard, M.R.C.S., L.S.A. ; Alfred Tom Rimell, M.R.C.S., L.R.C.P. ; and John Rogerson, L.R.C.P. & S. Edin., L.F.P.S. Glasg.

Master in Surgery.—Joseph William Leech, M.D., B.S., F.R.C.S., and William Hunter Richards, M.B., B.S.

Bachelor in Medicine (M.B.).—Ernest Bertram Appleby, William Robert Davidson Daglish, Mary Evelyn De Rusett, Henry Wallace Furnivall, James Alfred Giles, and James Herries Graham, College of Medicine, Newcastle-upon-Tyne ; Ivon Henry Skipwith Hawes, St. George's Hospital ; Kenred Manson, College of Medicine, Newcastle-upon-Tyne ; Lucy Selina Molony, London School of Medicine for Women ; Robert William Nevin, Henry Reah, Ralph Stuart Renton, Hermann Heinrich Ruffmann, and Alfred Henry Proctor, College of Medicine, Newcastle-upon-Tyne ; Godfrey De Bec Turtle, King's College ; Ralph Thomas Vaux, College of Medicine, Newcastle upon-Tyne ; Marmaduke Cordeux Wethereil, Guy's Hospital ; and Hugh Widdas and Thomas Wilson, College of Medicine, Newcastle-upon-Tyne.

Bachelor in Surgery (B.S.).—Ernest Bertram Appleby, William Robert Davidson Daglish, Mary Evelyn De Rusett, Henry Wallace Furnivall, James Alfred Giles, and James Herries Graham, College of Medicine, Newcastle-upon-Tyne ; Ivon Henry Skipworth Hawes, St. George's Hospital ; Kenred Manson, College of Medicine, Newcastle-upon-Tyne ; Lucy Selina Molony, London School of Medicine for Women ; Robert William Nevin, Alfred Henry Proctor,

Henry Reah, Ralph Stuart Renton, and Hermann Heinrich Ruffmann, College of Medicine, Newcastle-upon-Tyne; Godfrey De Bec Turtle, King's College; Ralph Thomas Vaux, College of Medicine, Newcastle-upon-Tyne; Marmaduke Cordeux Wetherell Guy's Hospital; and Hugh Widdas and Thomas Wilson, College of Medicine, Newcastle-upon-Tyne.

Diploma in Public Health (D.P.H.).—Charles Vincent Dingle, M.D., B.S., B.Hy. Durh.; Robert Ayton Dunn, M.D., B.S., D.Hy. Durh., M.R.C.S., L.R.C.P.; Alfred Reid, M.R.C.S., L.R.C.P.; and Robert Walker, M.B., B.S. Durh., M.R.C.S., L.R.C.P.

CONJOINT EXAMINATIONS IN IRELAND BY THE ROYAL COLLEGE OF PHYSICIANS AND ROYAL COLLEGE OF SURGEONS.—At the examination for the Diploma in Public Health the following candidates were successful:—

William E. Burton, M.R.C.S. Eng., L.R.C.P. Lond.; Frederick I. de Lisle, L.R.C.P., L.M. Edin.; Edward G. Gibbs-Smith, L.R.C.P. Irel., L.S.A. Lond.; L. R. More-O'Ferrall, F.R.C.S. Irel.; Rowan M'Combe, L.R.C.P. & S. Irel.; Michael M'Grath, L.R.C.P. & S. Irel.; Alex. G. Robb, M.B., B.Ch. R.U.I.; and Arthur Williams, L.R.C.P. & S. Edin.

OYSTERS AND TYPHOID FEVER.—The Sanitary Committee of the Cornwall County Council has decided to recommend that the county council shall petition the Local Government Board and the Board of Trade to allow an addition to the by-laws of the county council to prevent the laying of any oyster or any other shell-fish on grounds within the council's area that may be, in the opinion of the council, contaminated with sewage or other objectionable matter.

THE LATE DR. R. T. PEARSE.—Dr. Reginald Thomas Pearse died at his residence in Dawlish on May 5th in his 69th year. He was born at Bradninch, Devon, and received his medical education at the Bristol Medical School, taking the qualification of M.R.C.S. Eng. and L.R.C.P. Edin. in 1856 and 1859 respectively. He graduated as M.D. of St. Andrews University in 1889. Dr. Pearse practised for many years in Cathedral-road, Cardiff, and held several appointments in that town. He had recently resided at Dawlish for the benefit of his health.

A NOVEL PATENT.—An American inventor has patented a "burial vault" which appears to consist of a kind of outer coffin having a groove or channel all round the upper margin of the main portion or body to contain a sealing material, while the lid has a flange which dips into the sealing material. A coffin of the ordinary shape stands inside. An engraving and the specification will be found in the *Official Gazette* of the United States Patent Office issued on April 29th, 1902. It is not stated whether this contrivance is intended for the temporary custody of a corpse or for permanent sepulture; in the latter case it would, of course, be at variance with accepted hygienic principles.

FREEMASONRY.—*The Rahere Lodge.*—A meeting of the Rahere Lodge, No. 2546, was held at Frascati's Restaurant, Oxford-street, W., on May 13th, W. Bro. P. S. Abraham, M.D. Dub., W.M., being in the chair. Bros. Harke, Yetts, and Dunn were admitted to the third degree; Messrs. Thomas B. A. Haggard and Charles J. Ogle, M.R.C.S. Eng., L.S.A., were initiated into Freemasonry; while W. Bro. T. F. Vaisey, M.R.C.S. Eng., L.S.A., was elected a joining member of the Lodge. W. Bro. G. H. R. Holden, M.D. Cantab., was unanimously elected W.M. for the ensuing year, while W. Bro. Clement Godson, M.D. Aberd., was re-elected treasurer. A number of brethren afterwards dined together.

THE ROYAL INSTITUTION.—Exploration and Climbing in the Canadian Rocky Mountains formed the subject of the Friday evening discourse delivered at the Royal Institution on May 9th by Professor J. Norman Collie. His address, which was illustrated by a very large number of lantern slides, included a remarkable account of a member of his party being very little the worse after falling some 60 feet down a crevasse and becoming wedged in a most difficult position between two perpendicular walls of ice. Professor Collie claims to have corrected some misdescriptions in the geography of previous explorers, especially as regards the situation, and even the existence, of two peaks to which some 80 or more years ago David Douglas assigned the names of Mount Brown and Mount Hooker, after his friends the botanists Robert Brown and Sir William Jackson Hooker respectively. Professor Collie also described a mountain from which there descend rivers that flow into three oceans—namely (1), the Columbia river which falls into the Pacific Ocean; (2) the Athabasca river which empties itself into the Great Slave Lake and is continued as the Mackenzie river, falling into the Arctic Ocean; and (3) the Saskatchewan river which empties itself into Lake Winnipeg and, continued under the name of the Nelson river, ultimately falls into Hudson's Bay, an offshoot of the Atlantic Ocean.

CRUELTY TO FROGS.—At Clerkenwell Police-court on May 9th a fish and reptile dealer of Rosebery-avenue, Clerkenwell, was charged with causing unnecessary suffering to certain reptiles—namely, frogs. The evidence showed that a large number of frogs were massed together in a fish-bowl in the defendant's shop window. An inspector of the Society for the Prevention of Cruelty to Animals said that there were only two inches of water in the bowl; he had the frogs counted and found that there were 109, of which 20 were dead and others were in a dying condition. The defendant admitted to him that the frogs were overcrowded. The magistrate ordered the defendant to pay a fine of £2 and £2 2*s.* costs.

MEDICAL GOLF TOURNAMENT.—The fifth annual tournament will be held on May 29th at Northwood, by kind permission of the Northwood Golf Club. The regulations are the same as those of last year—viz., 18 holes match play *v.* Bogey, competitors being divided into two classes: (1) handicaps of 12 and under and (2) over 12. Members of the Northwood Club deduct two from their handicap. First and second prizes and a prize for best last nine holes *v.* Bogey in each class. Foursome sweepstakes *v.* Bogey will be played during the afternoon. No match may be started later than 3.15 P.M.; no previous play allowed on the day. Entries, stating lowest handicap and inclosing 5*s.* entrance fee, should be made before May 29th to the honorary secretary, Mr. Rolf Creasy, Windlesham, Surrey.

SURGICAL SPLINTS AS A PLACEBO.—At the Exeter Police-court on April 28th a woman appeared with her arm in splints and charged a lad, aged 10 years, with attacking her with a hatchet. The assistant house surgeon stated that the woman came to the Devon and Exeter Hospital for treatment. They could find nothing the matter with the arm but placed it in splints, as persons in similar cases would often say that they had been refused treatment if something of the sort were not done. The magistrates dismissed the case and the mayor said that the surgeons had no doubt acted in a manner which they thought for the best, but he suggested that it would be wiser not to pacify people by putting on splints when there was no necessity, because in this case the patient had used the splints for the purpose of getting a warrant against the boy, the magistrates believing that the case was more serious than it actually was.

A NOTABLE RECORD OF A COUNTRY PRACTITIONER.—Mr. Charles W. Izod, M.R.C.S. Eng. (1846), L.S.A. (1847), L.M. Dub., of Esher, Surrey, after 55 years' practice will retire in June next. This gentleman went to Esher in 1847 as surgeon to the Household at Claremont, near Esher, of the King of the Belgians, Leopold I., and subsequently retained the post under his niece, the late Queen Victoria, till her death on Jan. 22nd, 1901. He now holds a similar position under the Duchess of Albany. He was present at the death at Claremont on August 26th, 1850, of the abdicated King of the French, Louis Philippe, and later at the death of his wife (the daughter of Ferdinand IV., King of Naples) and at the death of the Duchesse de Nemours, their daughter-in-law, besides attending other members of the French Royal Family.

MISS WESTON'S WORK IN THE ROYAL NAVY.—A meeting was held in Exeter Hall, London, on May 6th to hear from Miss Agnes E. Weston the annual account of her work in the Royal Navy. Miss Weston stated that the number of sleepers at the Royal Sailors' Rests at Portsmouth and Devonport during the past year had been 246,696, an increase on the preceding year of 671. The receipts had been £21,626, an increase of £671. At Devonport building extensions had been begun to be dedicated to the memory of "Victoria the Good." 9048 temperance pledges had been taken, an increase of 585, and 142,668 parcels of literature weighing 37 tons had been distributed among the fleets. The circulation of *Ashore and Afloat*, edited by Miss Wintz, had reached 599,825 copies, an increase of 15,825; and, together with the *Blue Backs*—Miss Weston's monthly letter—the number reached was 1,266,505 copies, the military edition being distributed amongst the army, notably in South Africa.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Poor-law Nursing.

THE departmental committee appointed by the President of the Local Government Board to inquire into the question of the nursing provision in Poor-law infirmaries in England has been engaged during the last three months taking evidence and carrying on investigations. It is expected that the report of the committee will be ready early in June. The chairman of the committee is Mr. J. Grant Lawson, M.P., Parliamentary Secretary to the Local Government Board, and the secretary is Mr. H. R. Duff of the same Department.

HOUSE OF LORDS.

MONDAY, MAY 12TH.

The Shop Hours Question.

Lord AVEBURY moved the second reading of the Shops Early Closing (No. 2) Bill and explained that the measure contained certain safeguards upon the absence of which from the Bill introduced earlier in the session and rejected on second reading the Prime Minister had commented. According to the present Bill two-thirds of the shopkeepers must memorialise the local authority before the latter passed a regulation for the closing of shops and this regulation must obtain the consent of the Home Office and be submitted to Parliament. His Lordship urged that legislation on this subject was greatly needed. In many cases shop assistants, male and female, were working from 80 to 90 hours per week, hours grievously injurious to health.—The Earl of WEMYSS moved the rejection of the Bill.—The Earl of MORLEY and the LORD CHANCELLOR raised the point of order that this Bill was practically the same measure as their lordships had rejected earlier in the session and therefore was not competent.—The Marquis of SALISBURY, without going into the merits, supported this view of the matter.—The previous question was then moved and agreed to, the result being that no more will be heard of the Bill during the present session.

Accidents with Celluloid.

Lord SALTOUN asked the Government in view of the fact that celluloid was a highly inflammable and sometimes explosive substance, and that it was used freely in articles of attire, such as combs and collars, whether they would cause such modification to be used in its manufacture or place such regulations and restrictions upon its sale as would render impossible the recurrence of the many serious burning accidents which had already resulted from the unrestricted sale of this article. His lordship also quoted from an article in THE LANCET dealing with some experiments on the subject.—Lord BELPER, replying on behalf of the Home Office, said that he was informed that if celluloid was properly manufactured and free from impurities it would not take fire except at a very high temperature indeed—that was to say, it would only smoulder at a temperature of 440° F. and would not burst into flame until a temperature of 550° F. was reached. The accidents to which the noble lord had referred must have been due to the impurity of the materials used in the manufacture of the celluloid. The Secretary of State, having very carefully considered the matter and feeling the greatest possible sympathy with those who had sufferer from the accidents, did not see his way to interfere by legislation with the sale of celluloid.

HOUSE OF COMMONS

THURSDAY, MAY 8TH.

A Scottish Medical Appointment.

Mr. HARMSWORTH asked the Lord Advocate whether he was aware that on March 8th last the County Council of Caithness appointed a duly qualified medical practitioner to be medical officer of health of the county, and that this practitioner had not yet entered upon his duties consequent on delay on the part of the Local Government Board in intimating whether he would be allowed to have consulting practice; and whether he could state when the decision of the department would be communicated to the authorities at Caithness.—The LORD ADVOCATE replied: On March 12th the Local Government Board was informed that the County Council of Caithness had appointed a county medical officer with permission to engage in consulting practice. The Local Government Board did not interfere with the appointment or hinder the new officer entering on his duties. It was necessary, however, to consider whether the grant in aid of the cost of medical officers should be payable to the county council in respect of this appointment. The rule is that where the medical officer engages in consulting practice the grant is not given unless the Secretary for Scotland is satisfied that there are exceptional circumstances justifying this arrangement. The necessity of considering these circumstances in this case caused some delay but the county council has now been informed that the grant will not be given.

The Butter Standard.

Sir EDWARD STRACHEY asked the President of the Board of Agriculture whether he would immediately after May 15th take such steps as might be necessary to test the value of the standard for butter set up by the Board of Agriculture, so that the uncertainty now existing whether after that date milk-blended butter containing a higher percentage of moisture than permitted by the standard could still be sold might be determined.—Mr. HANBURY replied: It has not been the practice of the Board to anticipate the action of local authorities for the purpose of testing the effect of statutes, and in view of the full powers of local authorities I do not think that any special necessity for doing so arises in this case. The authority given by statute to the Board has been fully exercised in issuing the regulations.

FRIDAY, MAY 9TH.

Small-pox Hospital at Hanworth.

Sir FREDERICK DIXON-HARTLAND asked the President of the Local Government Board whether he was aware that a small-pox hospital was being erected at Hanworth, Middlesex, on land the surface water from which drained into the Thames at Hampton immediately above the intakes of the Southwark and Vauxhall Water Company, the Grand Junction Water Company, and the West Middlesex Water Company; whether he was aware that the site on which the building stood was at times under water from four to nine inches; and, seeing that it was contrary to the regulations of the Local Government Board issued in August, 1900, to build on a site where 400 persons reside within a quarter of a mile of the building, over 1000 within half a mile, and 3000 just outside that radius, whether he would take any, and if so what, steps to prevent the danger to the neighbourhood and London which was shadowed forth.—Mr. LONG replied: I am aware that a temporary small-pox hospital is being erected at Hanworth for the use of the urban districts of Hampton, Teddington, and Hampton Wick and complaints have been made to me with regard to it. I can only require the observance of the regulations referred to in the third paragraph of the question in cases in which the cost of the hospital is to be defrayed out of borrowed money. In the present instance I understand this is not proposed and I have therefore no authority to interfere. Having regard, however, to the allegations made, I have thought it desirable to instruct two of the officers of the department to visit the site and to report to me fully on the subject, and I have given instructions accordingly.

MONDAY, MAY 12TH.

The Butter Standard.

Mr. O'SHAUGHNESSY asked the President of the Board of Agriculture whether, in view of the fact that the Departmental Committee appointed to inquire into the standard of water in butter reported that many witnesses declared Irish salt firkin butter would be injuriously affected by any limit applicable to all other butters, as on account of its long-keeping qualities it necessarily contained a higher percentage of moisture than was found in any other butter, and considering that several public bodies in Ireland were protesting against the new regulations as applicable to this class of butter, he would consider the matter of fixing a separate standard for it.—Mr. HANBURY said: I am not aware that salt butter will in any way be injuriously affected by the new standard, nor was any evidence, I believe, given to that effect. The brine butter, to which hot brine is added instead of salt, with the result of largely increasing the percentage of water, will, no doubt, be affected, but the practice has for some time been dying out and at a meeting of the South of Ireland Butter Merchants' Association held in Limerick a day or two ago it was, I understand, resolved to recommend the use of dry salt instead. I believe such a course will do much to add to the price of the butter and in any case the Irish Department agreed with me in fixing the standard of water in butter which is the same in both countries.

Sir EDWARD STRACHEY asked the President of the Local Government Board whether his Department had decided that the substance known as milk-blended butter was an impoverished article of food as defined in Section 1, Part VII., of the Sale of Food and Drugs Acts, 1899, and whether he would take such steps as might be necessary to test the value of the standard for butter set up by the Board of Agriculture under the powers given to his Department by Section 2 of the same Act.—Mr. LONG replied: Section 1 of the Act referred to imposes penalties on persons who import certain adulterated or impoverished articles, but the Local Government Board have no power to decide what is an impoverished article for the purposes of this section. As regards the second part of the question the Board of Agriculture have, in the exercise of their statutory powers, made regulations for determining the proportion of water in butter which raises the presumption that it is not genuine. I could not undertake to direct that samples should be procured with a view of testing the value of the standard thus set up.

WEDNESDAY, MAY 14TH.

The Butter Standard.

Mr. JOHN REDMOND asked the President of the Board of Agriculture whether his attention had been called to the paragraph in the interim report of the Butter Regulation Committee, in which it was stated: "The committee, moreover, understand that the vendors of this type of butter containing water in excess of the proposed official limit would be legally protected provided that a sufficient disclosure is made to the purchaser, and this consideration finally decided the committee to recommend the single limit and leave it to the vendors of Irish salt firkin butter to protect themselves in the simple manner indicated"; and whether, in view of the crisis in the butter trade, he would say whether the legal advisers of the department had been consulted upon this matter and if they agreed with the view expressed in that paragraph.—Mr. HANBURY replied: I have no power under the statute to do more than state what the standard should be. In the opinion of my legal advisers the effect of fixing a standard does not necessarily prevent the disclosure of an excess of water in butter being a sufficient defence, but, of course, I cannot say what view the courts may take. In any case, the report of the committee was intended to do no more than safeguard for a reasonable period an old-fashioned industry in which brine is used for preserving butter. In any steps that I have to take to prevent the fraudulent addition of water to butter in which the makers and sellers of both countries are interested, the view taken by the committee as regards the use of brine as a preservative of butter will of course be recognised.

Mr. REDMOND: Do I understand that in the opinion of the legal advisers disclosure will be a sufficient protection?—Mr. HANBURY: That is so.

ROYAL COMMISSION ON ARSENICAL POISONING.

EVIDENCE BY MR. FLETCHER MOULTON.

THE Royal Commission on Arsenical Poisoning held a meeting for the examination of witnesses on May 9th, in the Westminster Palace Hotel, Victoria-street, S.W. In the absence in America of Lord Kelvin the chair was taken by Sir WILLIAM HART DYKE, M.P., the other members of the Commission present being Sir William S. Church, Professor Thorpe, Dr. B. A. Whitelegge, and Mr. Cosmo Bonsor with Dr. G. S. Buchanan of the Local Government Board, secretary.

MR. J. FLETCHER MOULTON, K.C., M.P., examined by Sir W. HART DYKE, said that on the occurrence of what had come to be known as the Manchester scare he was consulted next after Mr. Gorton Salamon and the whole case was put before him by Mr. Groves, M.P., and when it was decided that a committee of experts should be formed he had the question of the most suitable members for the committee put before him. Almost immediately after the discussion between Mr. Gordon Salamon, Mr. Groves, and himself the members of the committee were selected and he, with the others, proceeded to Manchester to investigate matters on the spot. It became perfectly clear to them that the mischief was very widely spread. The Manchester brewers were for the most part incredulous as to the possibility of there being any serious arsenical poisoning. It was a thing so utterly without precedent that at the time when the committee arrived the brewers believed that it was something that had gone wrong with one particular brewer's product and they had no appreciation of the extent to which it was common to the whole trade. The consequence was that the first effort of the committee was to make the whole of the brewers realise that the mischief was not confined to any one brewer but that a large number of brewing houses must necessarily be implicated in it because it came from sugar which was largely used in the neighbourhood. The object of the committee at first was by means of making the brewers realise the scale of the calamity to get some measures adopted immediately which would put a stop to all future mischief. He wished to put that before the commission because in his opinion there never was vacillation or change of view on the part of the members of the committee of experts with regard to the tests used or the measures to be adopted, but the problem of defining some immediate step, some test which would be practical and which would prevent future mischief, was a different task from the deciding what should be the precautions to be used in future when the object was not to stop the possibility of the present danger but to give absolute security for the future. As to the early discussions as to the measures to be taken the members of the committee always kept in mind that these were emergency precautions. When the case had been put before the brewers the committee received every assistance from them. He did not believe that from that time any beer got out which could possibly cause any mischief except perhaps by accident. He thought that he remembered one case coming before the courts in which beer had been sold subsequently to the announcement of precautionary measures, but it was obviously an isolated case and due to confusion between two casks. But substantially from the time that the brewers became aware of the gravity of the matter and what steps ought to be taken by way of precaution all further evil, he thought, ceased. As president of the committee he desired formally to present to this Commission its final report. The committee very soon came to the conclusion that although the mischief was substantially due to the Bostock sugar there was another source of arsenic in beer, namely, the malt. He was bound to say that all other sources seemed to be capable only of producing infinitesimal quantities of arsenic in beer. But the malt was obviously a very serious question and the committee resolved that it would not give a final report until there had been a most searching examination of all the materials used in beer to discover the possibility of arsenical contamination. For the purposes of this report there had been an amount of careful analysis far beyond anything in his experience. The analyses pointed to a very large amount of arsenic in certain portions of malt in the culms and also a considerable amount in the skin of malt. He thought this came as a surprise to every one of them. He remembered Sir Edward Frankland producing at the Royal Institution some crystals of arsenic which he got in the air of London which he attributed to the burning of Midland coal in large quantities. The English method of malting differed from that used in some countries in that the direct products of combustion had access to the grain and in this way arsenic was deposited upon it. In the report there were analyses of specimens of malt which showed a quite considerable amount of arsenic. In this connexion he wished to speak of the impression made upon his mind as a mere observer and not at all as a person entitled to speak from a medical point of view by the close resemblance which all medical men found between the neuritis which characterised this epidemic and the alcoholic neuritis which had never been attributed to arsenic. The proceedings left upon his mind a suspicion that arsenic had played a considerable part in what was called the alcoholism produced by beer and that probably that was due to the fact that this contamination in malting had been very common in past years and that small as the contamination was it might have, in certain constitutions, produced morbid effects. That was the suspicion produced in his mind and he did not think that it was a suspicion which should be completely abandoned because of theoretical arguments as to the smallness of the contamination. One thing that made him cling to the suspicion was the peculiar irregularity in the connexion between the quantity of beer drunk and the arsenical poisoning. There was no doubt in his mind that people who must have drunk very large quantities of beer contaminated by arsenic did not suffer. The peculiarity of this case was that they knew accurately when and to what extent the arsenic passed into circulation. They knew to a week when the arsenically-tainted sulphuric acid was sent to Messrs. Bostock; they used nothing but that; and they knew the quantities of sugar which they produced with it. They knew the localities where the sugar was used, and they had therefore for something like nine months the certainty that fairly heavily-charged beer was sold. They knew the breweries where the beer was sold. Now he inquired as to the employés of the breweries, especially one brewery, at which the committee obtained very complete information upon every point. It was notorious that the employés of breweries consume a large amount of beer and in this particular case with one exception none of them had suffered. The impression that came upon him was that the more poorly-fed people suffered rather than the people who were most alcoholic, who took most beer. In the cases which he saw there were a great number who showed no evidence of extreme alcoholism. He did not think that want of food determined it entirely and the impression left upon his mind was that constitutional peculiarities would make a great difference in the susceptibility to poisoning by these small quantities. If, therefore, they combined the very irregular influence of constitutional peculiarity with the possibility that there had been for years a small contamination due to the difficulty of malting, he should not be surprised if the fact that the attention of the brewing public had been called to it, so that malt would no longer be allowed to be so contaminated, should make a very great difference in the presence of this alcoholic neuritis which had been so associated with it. He was only giving the view of an onlooker, not of an expert. He could not speak of his own knowledge as to whether any brewers had adopted the recommendations of the committee, but he should fancy that beyond exercising generally more care the brewers were largely awaiting the result of the present Royal Commission. He thought that the brewers were exceedingly anxious to have guidance upon the matter. He was satisfied that they were on their guard against arsenic and that there was absolutely no danger lurking on the side of brewing sugar. A scare like this made it quite impossible in an industry of this kind that such a blunder should be made again. He took a different view about the malting, because they could not test their malt as they could test their sulphuric acid, and therefore malting would be rendered safe, first by better methods—perhaps the American method, whereby the fumes did not come directly on the malt—or by better tests, or by selection of fuel. With regard to that he thought that the brewers were likely to have held their hands and waited until this Royal Commission authoritatively laid down the precautions which they ought to take. There was a recommendation in the report of the committee that brewers should require a written guarantee of freedom from arsenic in all brewing materials. He did not think that such a guarantee would indemnify the brewer: the real good of it was that it dinned the word "arsenic" into the ears of the person who was selling brewing materials. It was a sense of too much security which was the source of danger and if in connexion with the selling of brewing materials there was a guarantee pointing to arsenic, people would always be on their guard against it. Nothing was easier than to keep it out; the danger was of forgetting, and the real advantage of this guarantee would be that it would be impossible for persons producing brewing materials ever to forget the risk of arsenic. He was of opinion that the recommendations of the committee in this connexion would be greatly strengthened if official tests for brewing materials were prescribed. If the Board of Inland Revenue could get a test which was practical, easy of application, and gave a substantial security, he thought that it would be of the greatest service. He did not think that an absolute test which was difficult of application would be nearly so useful as a practically sufficient test which could be certain and easily applied. He thought that the danger of rejection was such that the existence of a practical and easily applied, and therefore frequently applied, test would make the maltsters adopt methods which would keep malt perfectly free from arsenic. They would not run the risk of the great loss, both in reputation and pocket, of rejection, and he thought that the frequency of the application and its readiness would be very much more serviceable than what they might call a scientific infallibility. There was no evidence before the committee of any beer which produced evil effects otherwise than by frequent drinking—the toxic character of the beer never rose to such a point that once drunk it produced an evil result. He thought that the proposed test should be made in connexion with the Sale of Food and Drugs Act. The most important thing would be that this Commission, by appealing to the Board of Inland Revenue or some other high authority, should state what it thought was adequate and practicable in the way of watchfulness on the part of the producers; then the ordinary powers of public analysts under the existing statutes would enable them to test beer or brewing materials. It was important that people should know what they had to live up to. In the present state of things there was much costly and difficult litigation, whereas if purity meant to live up to a certain standard decided in a particular way much of this litigation would be avoided and the results to the public would be admirable. He was aware that the committee recommended an official board of referees for this purpose. He was not very fond, if he might use the phrase, of courts *ad hoc*. It was difficult to get good courts. They had good courts in the judicial system and so far as the decision went he should prefer to leave it to the existing courts, but the definition of purity should be a practical one. He did not think that it ought to be made a statutory duty to require a warranty. He did not think that that was any good. He thought that it would be enough to say that it would be an act of great carelessness for a brewer to buy without it. If they were going to say that it was a statutory duty then there arose a great many questions as to what came within the meaning of the word "warranty," but if they put it that a man with a proper conception of his responsibilities would not, in the opinion of this Royal Commission, act otherwise it would have a far more wide-reaching effect. Supposing a man did not do it he would know that if any trouble came he had neglected to do it at his peril and that would have a really wider effect and at the same time it would be less onerous and technical than if it were embodied in legislation and made a statutory duty. He thought that the greatest kindness that this Commission could do the public, especially to the trade, was stating what it thought was the duty of a person, where were his responsibilities and stating in detail how in its opinion he could adequately discharge that duty.

By Sir WILLIAM S. CHURCH: With regard to the large discrepancy between the comparative numbers of cases of so-called alcoholic neuritis in the Manchester and Liverpool district and in London or in Scotland he remembered that in its investigations the committee found that the southern malts were much freer from arsenic that the northern, and that might be an important consideration.

By Dr. WHITELEGGE: He would have a standard for testing both the finished beer and brewing materials. This would be valuable not only for the purposes of the Inland Revenue but also for the purposes of the Sale of Food and Drugs Act. He thought that the Commission should state that samples should answer such-and-such a test and if they went beyond it they would come within the Sale of Food and Drugs Act. The test should apply to the manufacturer who sold wholesale and not to the actual consumer.

By Professor THORPE: The tests which he had in his mind ought to be capable of application by the maltster or the brewer. No doubt more stringent tests would require to be formulated for subsequent use but there should first be such tests as could be applied by practical men engaged in malting and brewing.

EVIDENCE BY MR. GORDON SALAMON.

MR. GORDON SALAMON, chemist and member of the committee of experts, was also examined. In the course of his evidence he said that in the light of present information the line should be drawn higher than one-fiftieth of a grain of arsenic per gallon. In his opinion there was no reason why beer should contain one-hundredth of a grain per gallon. Cases had occurred where it had contained more but they were very rare. Witness discussed at great length the question of tests. In this matter he said that it was necessary to cater

for the small brewer rather than for the large brewer who kept his chemist upon the premises or engaged a professional analyst. In the future the large brewer would do as he was doing at present, take every possible precaution to prevent his product from being contaminated with arsenic, but the small brewer who had to compete with him would be tempted by cheap material which was possibly impure. He knew that much of the bad malt which was made with gas-coke was offered to large brewers and refused by them because of its containing more arsenic than was now considered desirable and that it had been taken by smaller brewers because of its cheaper price. He suggested that the Commission ought to approve a test which would enable the small maltster or brewer to be sure that what he was sending out was free from arsenic and he thought that the proper application of the Reinsch test would enable him to do so. Witness exhibited to the Commission a specimen of this test disclosing $\frac{1}{100}$th of a grain of arsenious acid per pound of malt. It was, he said, easy of application and would suffice to put the maltster on the *qui vive*. He, of course, did not suggest it as an official test but merely for the practical purposes of the manufacturer. He was strongly of opinion that the use of gas-coke as fuel in drying malt should be prohibited. His experience had convinced him that there was no necessity for its use. It was employed simply on the ground of economy, and now that it had been established as a source of danger it should be prohibited. During the past six months the presence of arsenic in malt, even in minute quantities, had become very much rarer, and this he attributed to the diminished use of gas-coke.

The Commission then adjourned.

BOOKS, ETC., RECEIVED.

ALLEN, GEORGE, 156, Charing Cross-road, W.C.

The Buried Temple. By Maurice Maeterlinck. Translated by Alfred Sutro. With Portrait. 5*s.* net.

BAILLIÈRE, TINDALL AND COX, 8, Henrietta-street, Covent-garden, W.C.

Clinical Lectures on Stricture of the Urethra and Enlargement of the Prostate. By P. J. Freyer, M.A., M.D., M.Ch. Second edition. Price 5*s.* net.

BLACKWOOD AND SONS, Edinburgh and London.

The Way of Escape. A Novel. By Graham Travers (Margaret Todd, M.D.) Price 6*s.*

COULET ET FILS, 5, Grand' Rue, Montpellier (Masson et Cie., Paris).

Maladies Nerveuses: Diagnostic, Traitement. Par J. Vires, Professeur agrégé à la Faculté de Médecine de Montpellier, Médecin de l'Hôpital Général. Préface par F. Raymond, Professeur de Clinique des Maladies Nerveuses à la Faculté de Médecine de Paris. Price 8 fr.

FANNIN AND Co., LIMITED, 41, Grafton-street, Dublin. (BAILLIÈRE, TINDALL, AND COX, London.)

Transactions of the Royal Academy of Medicine in Ireland. Vol. xix. Edited by John B. Story, M.B., F.R.C.S., General Secretary. Price not stated.

FROST, W. D., Madison, Wis., U.S.A.

A Laboratory Guide in Elementary Bacteriology. By William Dodge Frost, M.S., Instructor in Bacteriology, University of Wisconsin. Second revised edition. (Published by the author.) Price not stated.

GLAISHER, HENRY J., 57, Wigmore-street, W.

Clinical Lectures on Neurasthenia. By Thomas D. Savill, M.D., Physician to the West-end Hospital for Diseases of the Nervous System, London. Second edition. Price 5*s.* net.

GREEN, WILLIAM, AND SONS, Edinburgh.

Public Health and Preventive Medicine. By C. J. Lewis, M.D., D.Sc. (Public Health) Edin., and Andrew Balfour, M.D., B.Sc. (Public Health) Edin., D.P.H. Camb. Price not stated.

HIRSCHWALD, August, Unter den Linden, 68, Berlin, N.W.

Internationale Beiträge zur Inneren Medicin. Ernst von Leyden, zur Feier seines 70-jährigen Geburtstages, am April 20, 1902, gewidmet von seinen Freunden und seinen Schülern. Erster Band, Preis Marks 18, zweiter Band, Preis Marks 12.

HOEPLI, ULRICO, Milan.

La Pellagra. Storia, Eziologia, Patogenesi, Profilassi. Del Dott. G. Antonini, Direttore del Manicomio Provinciale di Pavia in Voghera. (Manuali Hoepli.) Price L. 2.

Il Medico Pratico. Del Dott. Carlo Muzio. Terza edizione rifatta del Nuovo Memoriale pel Medici Pratici. Price L. 5. (Manuali Hoepli.)

Manuale di Chimica Legale (Tossicologia). Prof. Cav. Nicola Valentini, Chimico Igienista. Price L. 2.50. (Manuali Hoepli.)

KING, P. S. AND SON, Orchard House, Westminster, S.W.

Report on a Visit of Inspection to Colonies and Hospitals for Epileptics, the Feeble-minded, and the Insane in the United States of America. By J. Milson Rhodes, M.D., and Edwin W. Marshall, C.A. Price not stated.

Municipal Affairs: A Bibliography of the World's Municipal Literature. By Robert C. Brooks. Second edition, revised and enlarged. Price 6*s.* net.

LIVINGSTONE, E. & S., 15, Teviot-place, Edinburgh.

Elementary Text-book of Zoology. By Arthur T. Masterman, M.A. Cantab., D.Sc. Lond., D.Sc. St. And., F.R.S.E., Lecturer on Zoology and on Biology in the School of Medicine of the Royal Colleges, Edinburgh. Second edition. Price 12*s.* net.

LONGMANS, GREEN, AND Co., 39, Paternoster-row, E.C.

A Manual of Surgical Treatment. By W. Watson Cheyne, C.B., M.B., F.R.C.S., F.R.S., Professor of Surgery in King's College, London, and F. F. Burghard, M.D. and M.S. Lond., F.R.C.S., Teacher of Practical Surgery in King's College, London. In Six Parts. Part VI., Section I. The Treatment of the Surgical Affections of the Tongue and Floor of the Mouth, the Pharynx, Neck, Œsophagus, Stomach, and Intestines. Price 18*s.*

Lectures on the Use of Massage and Early Passive Movements in Recent Fractures and other Common Surgical Injuries, the Treatment of Internal Derangements of the Knee-joint and the Management of Stiff Joints. By Sir William H. Bennett, K.C.V.O., F.R.C.S., Senior Surgeon to St. George's Hospital, Member of the Court of Examiners, Royal College of Surgeons of England, &c. Second edition. Price 6*s.*

The Elements of Mind. Being an Examination into the Nature of the First Division of the Elementary Substances of Life. By H. Jamyn Brooks. Price 10*s.* 6*d.* net.

Memoirs and Letters of Sir James Paget. Edited by Stephen Paget, one of his sons. New edition (seventh impression). Price 12*s.* 6*d.* net.

MALOINE (Librairie), 23-25, rue de l'Ecole de Médecine, Paris.

Annuaire des Eaux Minérales, Stations Climatiques et Sanatoriums de la France et de l'Etranger. Par le Docteur G. Morice, Rédacteur-en-chef de la Gazette des Eaux. Price 1 fr. 50.

MURRAY, JOHN, Albemarle-street, W.

Savage Island: an Account of a Sojourn in Niué and Tonga. By Basil Thomson, Governor of Dartmoor. Price 7*s.* 6*d.* net.

REBMAN, LIMITED, 129, Shaftesbury-avenue, W.C.

A Manual of Ophthalmoscopy for Students and General Practitioners. By J. E. Jennings, M.D. (Univ. Penna.), formerly Clinical Assistant Royal London Ophthalmic Hospital, London. Price 7*s.* 6*d.* net.

A Pocket Cyclopedia of Medicine and Surgery. Based upon "A Cyclopedia of Practical Medicine and Surgery." Edited by George M. Gould, A.M., M.D., and Walter L. Pyle, A.M., M.D. Price 5*s.* net.

The Theory and Practice of Medicine. By Henry Walter Syers, M.A., M.D. Cantab., &c., Senior Physician to Out-patients to the Great Northern Central Hospital. In two volumes. Vol. II. Price 10*s.* net. (Vols. i. and ii., 21*s.* net).

Clinical Hematology: A Practical Guide to the Examination of the Blood with reference to Diagnosis. By John C. Da Costa, Jun., M.D., Assistant Demonstrator of Clinical Medicine, Jefferson Medical College; Hematologist to the German Hospital, &c. Price 22*s.* 6*d.* net.

Agricultural Bacteriology: A Study of the Relation of Bacteria to Agriculture, with special reference to the Bacteria in the Soil, in Water, in the Dairy, in Miscellaneous Farm Products, and in Plants and Domestic Animals. By H. W. Conn, Ph.D., Professor of Biology, Wesleyan University. Price 11*s.* net.

A System of Physiologic Therapeutics. Edited by Solomon Solis Cohen, A.M., M.D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic. Vol. VI.: Dietotherapy and Food in Health. By Nathan S. Davis, Jun., A.M., M.D., Professor of the Principles and Practice of Medicine in North-western University Medical School. Price 12*s.* 6*d.* net.

The Diagnosis of Nervous and Mental Diseases. By Howell T. Pershing, M.Sc., M.D., Professor of Nervous and Mental Diseases in the University of Denver. Price 6*s.* net.

Diseases of the Intestines, their Special Pathology, Diagnosis, and Treatment. By John C. Hemmeter, M.D. Philos. D., Professor in the Medical Department of the University of Maryland. In two volumes. Vol. ii. Price 25*s.* net. (Vols. i. and ii., 50*s.* net).

Questions and Answers. Embracing the Curriculum of the Dental Student. Divided into three parts. By Ferdinand J. S. Gorgas, A.M., M.D., D.D.S., author of "Dental Medicine," editor of "Harris's Principles and Practice of Dentistry. Price 25*s.* net.

SAUNDERS, W. B., AND Co., London and Philadelphia.

Saunders' Year-book of Medicine and Surgery for 1902. Under the general editorial charge of George M. Gould, M.D. Price 25*s.* (12*s.* per volume).

UNIVERSITY PRESS, Dublin.

The Royal University of Ireland. Examination Papers, 1901. A Supplement to the University Calendar for the Year 1902. Price not stated.

UNWIN, T. FISHER, Paternoster-square, E.C.

The Sons of Glory: Studies in Genius. By Adolfo Padovan. Translated and adapted from the Italian by the Duchess Litta Visconti Arese. Price 6*s.*

VIEWEG, FRIEDRICH UND SOHN, Brunswick.

Lehrbuch der Anorganischen Chemie. Von Dr. H. Erdmann, Professor an der Königl. Technischen Hochschule zu Berlin. Third edition. Price, bound in cloth, M.15; in calf, M.16.

WITHERBY AND Co., 326, High Holborn, and 4, Newman's-court, Cornhill, E.C.

Lean's Royal Navy List. No. 98. April, 1902. Founded and edited by Lieutenant-Colonel Francis Lean, Royal Marine Light Infantry (retired). Price 7*s.* 6*d.*

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

BAILEY, E. C., M.B., B.S. Durh., has been appointed Certifying Surgeon under the Factory Act for the Crewe District of Cheshire.

BELL, K. DE R., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Uppingham District of Rutland.

BLACK, A. L., has been appointed House Surgeon to the Royal Victoria Hospital, Belfast.

BOND, FRANCIS THOMAS, M.D. Lond., M.R.C.S., has been re-appointed Medical Officer of Health for the Lydney (Gloucestershire) Rural District Council.

COMBS, ROWLAND HILL, M.D. Durh., has been appointed Medical Officer for the Rural District of Bedford.

CROWTHER, E. L., M.D. Aberd., has been appointed a Member of the Central Board of Health, Tasmania.

CROW, J., M.B., Ch.B. Glasg., has been appointed Medical Officer and Public Vaccinator for the Largs and Fairlie Districts Parish Council.

DALY, F. J. P., M.R.C.S., L.R.C.P., has been appointed Medical Officer to No. 10 District of the Hackney Union.

DAVIDSON, NORMAN, M.B., Ch.B. Aberd., has been appointed Medical Officer of Health for the Burgh of Peterhead.

GLENNY, EDMUND, L.R.C.P.I., L.R.C.S.I., has been appointed Senior House Surgeon to Jervis-street Hospital, Dublin.

GRACE, A. H., L.S.A., has been appointed Certifying Surgeon under the Factory Act for the Chipping Sodbury District of Gloucestershire.

HARMAN, N. BISHOP, M.A., M.B. Cantab., F.R.C.S. Eng., has been appointed Demonstrator of Pathology in the Middlesex Hospital Medical School, vice Dr. C. H. Reissmann.

HORROCKS, H., M.D. Lond., has been appointed Assistant Gynæcologist to the Perth Public Hospital, Western Australia.

JONES, O. C., M.B. Oxon., has been appointed Certifying Surgeon under the Factory Act for the Ilfracombe District of Devon.

KELSALL, H. T., M.D. Lond., has been appointed Ophthalmic Surgeon to the Perth Public Hospital, Western Australia.

MICHELL, J. C., M.R.C.S., L.S.A., has been appointed Certifying Surgeon under the Factory Act for the Lynton District of Devonshire.

MILNER, ERNEST ARTHUR, M.B., C.M. Edin., has been appointed Medical Officer of Health for Lostwithiel (Cornwall).

RANDLE, J. M., L.R.C.P. Lond., M.R.C.S., has been appointed Deputy Medical Officer of Health for the Borough of Helston, Cornwall, during the illness of Mr. W. Wearne.

RICHARDS, R. W., M.D. Lond., has been appointed Certifying Surgeon under the Factory Act for the Dolgelly District of the county of Merioneth.

RICHARDSON, W. P., M.B., M.S. Edin., has been appointed Certifying Surgeon under the Factory Act for the Blisworth District of Northamptonshire.

RUSSELL-WOODFORD, E., M.D., M.S. Aberd., M.R.C.S., L.S.A., has been re-appointed Medical Officer of Health for Ventnor Urban District Council.

RYAN, JOHN P., L.R.C.P.I., L.R.C.S.I., has been appointed Junior House Surgeon to Jervis-street Hospital, Dublin, vice Mr. Edmund Glenny.

SHAW, CECIL E., M.D., M.Ch. R.U.I., has been appointed Consulting Ophthalmic Surgeon to the County Antrim Infirmary, Lisburn.

SHAW, JAMES, M.D. Glasg., has been appointed Certifying Surgeon under the Factory Act for the Aylesbury District of Bucks.

STEVENSON, HOWARD, M.B., B.Ch., B.A.O. R.U.I., has been appointed House Surgeon to the Royal Victoria Hospital, Belfast.

TOTMAN, F., M.D. Lond., has been appointed Senior Surgeon to the Perth Public Hospital, Western Australia.

TRETHOWAN, W., M.B. Aberd., has been appointed Assistant Surgeon to the Perth Public Hospital, Western Australia.

TYNDALL, FRANCIS, M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory Act for the Westhoughton District of Lancashire.

WILLIAMS, CHISHOLM, F.R.C.S. Edin., has been appointed in charge of the Electro-Therapeutic Department, West London Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ARMY MEDICAL SERVICE, War Office, S.W.—Thirty Commissions.

BIRMINGHAM GENERAL DISPENSARY.—Resident Locums. Terms 4 guineas per week, with apartments.

BRADFORD ROYAL INFIRMARY.—Junior House Surgeon, unmarried. Salary £50 per annum, with board and residence.

BRISTOL CITY LUNATIC ASYLUM.—Medical Assistant, unmarried. Salary £140 per annum, increasing to £160, with apartments, board, and washing.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Junior House Surgeon for six months. Salary at rate of £70 per annum, with board and residence.

CARDIFF UNION WORKHOUSE.—Assistant Medical Officer, unmarried. Salary £130 per annum, with rations, apartments, attendance, and washing.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Two House Physicians for six months, with board, washing, and residence provided, and salary at rate of £30 per annum.

CLONMEL UNION, FIVEMILETOWN DISPENSARY DISTRICT.—Medical Officer. Salary £100 per annum, with fees; also Medical Officer of Health. Salary £15 a year.

COLOMBO, CEYLON, MUNICIPALITY OF.—Medical Officer of Health. Salary equivalent to £400, rising to £500, and conveyance allowance.

CORNWALL ROYAL INFIRMARY.—House Surgeon, unmarried. Salary £100, increasing £10 a year, with board and apartments.

DURHAM COUNTY ASYLUM.—Third Assistant Medical Officer. Salary £150, rising to £180 a year, with apartments, board, laundry, and attendance. Also Locum Tenens. Salary 4 guineas per week.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Physician for six months. Board, residence, and honorarium of £25.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Locum Tenens. Board and 4 guineas a week.

GLASGOW SAMARITAN HOSPITAL FOR WOMEN.—House Surgeon.

HEREFORD COUNTY AND CITY ASYLUM.—Senior Assistant Medical Officer. Also Junior Assistant Medical Officer. Salary £150 and £100 per annum respectively, with board, lodging, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Clinical Pathologist and Bacteriologist. Honorarium 50 guineas.

HOSPITAL FOR WOMEN, Soho-square, W.—Honorary Assistant Anæsthetist.

KENT AND CANTERBURY HOSPITAL.—Assistant House Surgeon, unmarried. Salary £60 a year, with board and lodging.

KENT COUNTY ASYLUM, Barming Heath, Maidstone.—Fourth Assistant Medical Officer and Pathologist, unmarried. Salary £175 per annum, rising to £200, with quarters, attendance, &c.

KINCARDINE, ROSS-SHIRE, PARISH COUNCIL.—Resident Medical Officer. Salary £72 10s. as Medical Officer and £5 per annum as Vaccinator, with lunacy fees in addition.

LANCASHIRE COUNTY ASYLUM, Whittingham.—Junior Assistant Medical Officer, unmarried. Initial salary £150, with apartments, board, washing, and attendance.

LANCASHIRE COUNTY ASYLUM, Winwick, Warrington.—Assistant Medical Officer, unmarried. Salary £150 per annum, rising to £200, with apartments, board, attendance, and washing.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN, 8, Hunter-street, Brunswick-square, W.C.—Lecturer on Forensic Medicine; Lecturer on Toxicology; and Assistant Secretary.

LONDON TEMPERANCE HOSPITAL, S.W.—Assistant Resident Medical Officer for six months. Honorarium at rate of 50 guineas per annum, with board and residence.

LONDON THROAT HOSPITAL, 204, Great Portland-street, W.—Non-resident House Surgeon. Honorarium at rate of £25 per annum.

MOUNT VERNON HOSPITAL FOR CONSUMPTION, Hampstead and Northwood, Physician; also Assistant Physician. Also two Clinical Assistants. Honorarium for the two latter £25 each.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Second Honorary Anæsthetist. Also Resident Medical Officer. Also Assistant Resident Medical Officer, both for six months. Salary at rate of £50 per annum each, with board, residence, and washing.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon, unmarried. Salary £160 per annum, with apartments, attendance light, and fuel.

POPLAR HOSPITAL FOR ACCIDENTS, Poplar, E.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board and residence.

ROYAL ALBERT HOSPITAL, Devonport.—Resident Medical Officer, unmarried. Salary £110 per annum, with board and lodging.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road, S.E.—Resident Medical Officer; also Assistant Obstetric Physician.

ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL, Southampton.—Senior and also Junior House Surgeon. Salaries £120 and £60 per annum respectively, with rooms, board, and washing. Also Dentist.

ST. NICHOLAS'S INDUSTRIAL SCHOOL, Manor Park, E.—Medical Officer.

ST. PAUL'S HOSPITAL FOR SKIN AND GENITO-URINARY DISEASES, Red Lion-square, W.C.—Clinical Assistant in the Out-patient Department for three months.

SEAMEN'S HOSPITAL SOCIETY.—Surgeon; also Honorary Anæsthetist.

STAFFORDSHIRE GENERAL INFIRMARY, Stafford.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and washing.

SUFFOLK GENERAL HOSPITAL.—House Surgeon. Salary £100 a year, with board, lodging, and washing.

TORBAY HOSPITAL, Torquay.—House Surgeon. Salary £100 per annum, with board, residence, and washing.

VICTORIA HOSPITAL FOR CHILDREN, Queen's-road, Chelsea, S.W.—House Surgeon for six months. Honorarium of £25, with board and lodging.

WALLASEY DISPENSARY AND VICTORIA CENTRAL HOSPITAL, Liscard.—House Surgeon, unmarried. Salary £100, with board, apartments, and service.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Physician, also House Surgeon. Salary (in each case) £100 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BURROWS.—On May 9th, at The Haven, Harrow-on-the-Hill, the wife of Harold Burrows, M.B. Lond., of a son.

MARTIN.—On Jan. 21st, at Wellington, N.Z., the wife of Albert Martin, M.D. Durh., of a son.

PERMEWAN.—On May 9th, at Normanton-avenue, Liverpool, the wife of William Permewan, M.D. Lond., F.R.C.S., of a daughter.

PEMBREY.—On May 5th, at Parkside, Clewer-green, Windsor, the wife of M. S. Pembrey, M.D. Oxford, of a son.

RUTHERFURD.—On the 13th inst., at 12, Newton-place, Glasgow, the wife of Henry Rutherfurd, M.B., a son.

MARRIAGE.

BRYETT—LEONARD.—On the 29th of April, at Holy Trinity Church, Winchester, by the Rev. Allan Gunn, rector, assisted by the Rev. J. F. Matthews Duncan, M.A., William Robert Bryett, B.A., M.D., London, second son of Lewis Bryett, to Mary Elizabeth, daughter of his Honour the late Judge Leonard of Kerrfield, Winchester, and Queen's Fort, Tuam, Ireland.

DEATHS.

BODINGTON.—On Thursday, May 8th, at Hotel d'Jena, Paris, George Fowler Bodington, M.D. Durh., aged 73.

FREELAND.—On April 15th, 1902, at Parham, Antigua, West Indies, Freeland John Freeland, M.D., L.R.C.P. Lond., M.R.C.S. Eng., L.S.A. Lond., elder son of J. B. Freeland, M.R.C.S. Eng., and brother of Douglas L. Freeland, L.R.C.P. Lond., M.R.C.S. Eng., of Smodland, Kent, aged 40 years.

HOADLEY.—On March 14th, 1902, at Havelock, Marlborough, N.Z., Robert Hoadley, M.D., M.R.C.S.E., formerly of Fulham, S.W.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

IS IT THE DUTY OF THE PUBLIC VACCINATOR TO VACCINATE ALL APPLICANTS?

To the Editors of THE LANCET.

SIRS,—I should be obliged if you would give me your opinion and also, perhaps, elicit that of the public vaccinators as to whether they are required to vaccinate *all* who ask, to vaccinate or revaccinate them with official lymph in their public capacity—i.e. (because they are the public vaccinators), the patient believing "efficient and innocuous lymph could only be obtained by them"? This question is causing concern and unrest in the minds of medical men, controversy and heated argument on the part of the public, especially at different boards of guardians when large medical bills are presented by their clerk for payment. Such was the case at the last meeting of the Guardians of Poole Union when a bill of £159 for revaccination was produced by our clerk. The chairman of the Relief Committee proposed, "That a list of all those who had availed themselves of revaccination by the public vaccinator (not being paupers) at the expense of the ratepayers should be published." I seconded this, observing that I thought it mean and contemptible to resort to the public vaccinator as many well-to-do people had done for themselves, their families, and household, and that it was a reflection on, and insult to, their private medical man to assume, or to think for one moment that only by vaccination by the public vaccinator could they be efficiently secured from the risk of contracting small-pox. This caused a fellow guardian who was sitting next to me at once to rise and, with some warmth, to state that he dissented entirely from my speech, for he had availed himself of the public vaccinator because he was told, and it had been stated in Parliament, that efficient lymph could only be obtained from the public vaccinator; he had been revaccinated since infancy four times and without result until he was vaccinated recently by our public vaccinator; he deprecated the suggestion that men of means and position could do so from unworthy motives; "he offered the fee," which was refused; and he considered as a large ratepayer, and even for example' sake, he was perfectly at liberty to avail himself of a public duty which, in his opinion, could only be done efficiently by the public vaccinator. I replied that although in the case of the last speaker all who knew him as we did could not for a moment have thought that he had been vaccinated or had had his servants vaccinated to avoid the paltry fee, for we well knew his open-handed generosity and large-heartedness, still many had done so presumably for that reason, and I did protest against the statement that efficient lymph was to be obtained only by the public vaccinator, and that if it were so—that we could not be vaccinated successfully without evil consequences only by accepting of vaccination by the public vaccinator—it would indeed be sad and lamentable and must be quickly rectified, but I thought that I could prove that this was not so, that it was not necessary to receive pauper medical aid in order to be protected effectually by the great blessing of vaccination. I had myself lately revaccinated with most excellent results my two daughters, my son, one of my servants, and a friend with excellent lymph obtained from the Jenner Institute. I have also procured excellent lymph from Dr. Renner, Marylebone-road, N.W. I thought the public vaccinator should have accepted the fee offered and not have included our fellow guardian in his list for payment by the guardians, at any rate this was my custom when I was in my early years, for a short time, a public vaccinator.

Your reply, I think, will interest many readers of THE LANCET and oblige,

Yours truly,

May 12th, 1902. FREDERICK H. ALDERSON, M.D. St. And.

*** A public vaccinator must perform his duty towards anyone who claims his official services, but a good citizen would not desire to make his neighbours pay unfairly for him. A leading article in this week's issue deals with other points in Dr. Alderson's letter.—ED. L.

"FALSE COLOURS."

To the Editors of THE LANCET.

SIRS,—My attention has been drawn to an editorial note in THE LANCET of May 10th, p. 1369, having reference to myself. As I have always found that your journal is conducted with courtesy as well as ability I am the more surprised that you should not have communicated with me before inserting it. You would then have learnt privately the facts to which I request you to give the same publicity as the paragraph in question.

1. I have never authorised any person to represent me as a medical member of the Malthusian League. 2. I have never been aware directly or indirectly that I was so represented. 3. I do not, as you unjustly assume, receive the *Malthusian* monthly, but, on the contrary, have never even seen or heard of the paper for at least nine years. 4. I am not, and never have been, a subscribing member of the League and have no knowledge or information of having been made an honorary member, although to some extent the needs of modern civilisation compel me reluctantly to assent to its general principles. I may add that I am no more responsible for the manner in which I am described without my knowledge in a medical direction than I am for the fact that I receive many letters addressed me as "the Rev." because I am an M.A.—not, I am sure, for any other qualification. In conclusion, I may say it would be extremely inconsistent with my published and repeatedly expressed views regarding the training and government of the medical profession in this country to cause myself to be considered a member of that body. This I say in no personal disrespect to medical men, among whom I reckon some of my warmest friends but in honest disavowal of the suggestion that your paragraph would seem to convey.

I am, Sirs, yours faithfully,

H. S. SCHULTESS YOUNG.

Essex-court, Temple, E.C., May 12th, 1902.

THE TREATMENT OF STAMMERING.

To the Editors of THE LANCET.

SIRS,—Can any of your readers kindly give me hints as to the best way of dealing with a case of stammering in a young lady, aged about 18 years? I imagine that it may be necessary to put the patient under the care of someone trained in the teaching of elocution and voice-production. If so I shall be grateful to any brother practitioner who can privately recommend me a teacher whom he has found to be efficient and satisfactory. I inclose my card and, venturing to trespass on your kindness, ask you to be so good as to permit me to call at your offices for any replies to my query.

I am, Sirs, yours faithfully,

KOAX-KOAX.

THE INSURANCE VALUE OF THE LIFE OF A MEDICAL MAN.

DR. J. HOWE ADAMS of Philadelphia, writing in an American contemporary on the subject of accident insurance, makes some interesting remarks with regard to medical men as "risks." He says:—

> "The two classes which are considered the cream of the accident business are the 'preferred' and the 'select' who need pay only $5 and $4 respectively a thousand, the difference being that the select is allowed twice the maximum amount of the preferred for death as a rule.....Accident companies regard the physician as a better risk than the surgeon and they regard the city physician better than his brother practitioner in the country. As the city physician is regarded as the best risk he is put in the best class, the select. Next comes the physician and surgeon with city practice only; he is placed in the preferred class, while the country physician and surgeon is placed down in the classification as 'ordinary,' which is the fourth from the top, for which he must pay twice as much as his city brother and be limited to half the amount of indemnity in case of accident or death by accident. This is the cold-blooded view which the accident companies take of the dangers of the country doctor's life."

FOREIGN MEDICAL LITERATURE.

To the Editors of THE LANCET.

SIRS,—Concerning foreign literature, I beg to inform "Northern Reader" (THE LANCET, May 3rd, 1902, p. 1293) that the leading medical booksellers of Berlin are Messrs. Speyer and Peters, N.W., 43, Unter den Linden; Urban and Schwarzenberg, N.W., 39, Dwotheenstrasse; and A. W. Hirschwald, N.W., 68, Unter den Linden. The leading medical weekly periodicals are *Deutsche Medicinische Wochenschrift*, *Berliner Klinische Wochenschrift*, and *Münchener Medicinische Wochenschrift*.

I am, Sirs, yours faithfully,

Berlin, May 7th, 1902. Dr. EUGEN COHN.

"POISONOUS PROPRIETARY MEDICINES."

To the Editors of THE LANCET.

SIRS,—I have just noticed your remarks in reference to th sale of "Bromidia," in your paper of May 3rd, by "a Fleet-street Druggist." Being the "Fleet-street Druggist" referred to, I beg the favour of the insertion in your next issue of the following. Quoting your own motto, *Audi alteram partem*, you say I have been in the habit of selling "Bromidia" to anyone who might ask for it. That is not correct. I have been in the habit of dispensing it, but not otherwise selling it. That particular bottle was the first sold entire over the counter. And further on you state that I was in the habit of selling it without labeling it "Poison." (Though that would be true if we were in the habit of selling it.) We only label dispensed medicine according to the instructions of the doctor. As regards labeling the bottle 'Poison," let me remind you that that is not our duty. It is the duty of the maker and first vendor. We are not supposed to know the composition of a "patent medicine," and it would be the height of impertinence to put "Poison" upon another's preparation which the maker does not acknowledge as a "poison" and moreover calls it by some innocent name.

You make the following remarks to the jury's rider: "How long are such representations by juries to be made and to go unheeded? How often are lives to be sacrificed before the law regulating the sale of poisonous proprietary remedies is amended?" In this particular instance, and in some others, the medical profession are alone to blame, if blame exists. If medical men would but trust "druggists" to dispense their prescriptions very little would be heard of such sad accidents. The fact is, many medical men when they leave the hospital are not able to write a prescription. Hence they have recourse to these quack compounds. The patient soon discerns the preparation and purchases for himself. "Druggists are not trusted to dispense a simple pill of quinine or iron, and many other

single remedies and compounds, too, but the doctor must go to America, France, or Germany for the preparation he wishes to administer to his British patients.

If all intended for the medical profession were compelled to work for nine months behind a "druggist's" counter, where a good dispensing business is done, they would not only know how to write a prescription but be able to dispense it. As things are, with their insufficient knowledge of pharmacy they find it easier to prescribe a nostrum. The bottles of "Bromidia" are not labeled "poison" and do not state the use or the composition. Who would suppose that under the name of "Bromidia" it was a preparation of Indian hemp and in addition every dose of it contains a poisonous quantity of chloral? After the fatal accident I found a formula in "Harwood Lescher's Recent Materia Medica" and one in Martindale's, also one in a trade journal, all three differing from one another. These I gave to the coroner who read two of them to the jury. He evidently thought it quite natural that one might not know the contents till after an accident.

I am, Sirs, yours faithfully,

Fleet-street, E.C., May 13th, 1902. GEO. P. POND.

*** We do not understand every word of this letter. Mr. Pond will acknowledge that it is unfortunate that the only bottle of "Bromidia" ever "sold entire over the counter" should have brought about a tragedy. We endorse his regrets that medical men nowadays should be too often inexpert pharmacists.—ED. L.

THE "Y" FUND.

SURGEON-GENERAL H. S. MUIR begs thankfully to acknowledge additional donations towards the above Fund from Lieutenant-Colonel Sir John G. Rogers, K.C.M.G., D.S.O., A.M.S. (retired); Surgeon-Lieutenant-Colonel Sir J. R. A. and Lady Clark; Lieutenant-Colonel J. J. Lamprey, I.M.S. (retired); Professor D. J. Cunningham; Dr. Murison; Dr. J. R. S. Robertson (Southsea); Dr. E. L. Fenn; Dr. Blandford; Dr. Frazer; Mrs. Snape; Mr. and Mrs. H. Gilbert Barling; Surgeon-General and Mrs. I. O'Farrell; and the following officers and ladies of the Royal Army Medical Corps:—Colonel and Mrs. W. J. Charlton, Colonel and Mrs. W. F. Stevenson, Lieutenant-Colonel and Mrs. W. L. Chester, Lieutenant-Colonel and Mrs. W. E. Webb, Lieutenant-Colonel and Mrs. H. K. Allport, Lieutenant-Colonel and Mrs. T. B. A. Tuckey, Lieutenant-Colonel and Mrs. C. B. Hill, Lieutenant-Colonel and Mrs. L. W. Swabey, Lieutenant-Colonel and Mrs. Dick, Major and Mrs. H. Lynden Bell, Major and Mrs. F. H. Treherne, Major and Mrs. D. V. O'Connell, Major and Mrs. A. Kennedy, Major and Mrs. T. H. F. Clarkson, and Major and Mrs. H. M. Sloggett; Colonels J. L. Notter, W. J. Fawcett, J. P. Rooney, and G. D. N. Leake; Lieutenant-Colonels C. A. Webb, D. F. Franklin, W. Rowney, James, J. F. Brodie, M. Dundon, J. Stevenson (retired), Grant, Alexander, C. A. P. Mitchell, U. J. Bourke, F. T. Wilkinson, and T. M. Corker; Majors A. Stables, J. W. Jérome, M. T. Yarr, A. Dodd, C. W. Allport, G. H. Barefoot, W Hallaran, G. F. Alexander, A. J. Luther, A. de C. Scanlan, S. G. Allen, G. J. A. Tuke, J. D. T. Reekitt, H. A. Cummins, C.M.G., and J. Hickman; and Captains Hardy, E. McK. Williams, G. S. McLoughlin, D.S.O., A. Pearse, J. Greeh, G. S. Mansfield, and C. T. Samman. The fund now amounts to £140. It may be explained that this is in response to an appeal made privately to members of the profession for benevolent aid in a distressing case which has been described in a letter sent to a limited number of medical men (who would help the cause by kindly "handing on" to *confrères*). Should any reader of THE LANCET desire further particulars with a view to expressing *practical sympathy*, a copy of the letter will be forwarded on application to Surgeon-General Muir, 26, Kensington-gardens-terrace, Hyde Park, London, W.

PROPOSED MEMORIAL TO THE LATE SURGEON-GENERAL W. NASH, A.M.S.

THE following additional subscriptions to this fund have been received:—

	£	s.	d.
Lieutenant-Colonel H. Grier, R.A.M.C.	1	1	0
Lieutenant-Colonel R. H. Forman, R.A.M.C.	0	10	0
Lieutenant-Colonel G. Hughes, D.S.O., R.A.M.C.	1	1	0
Major D. Semple, R.A.M.C.	1	1	0
Colonel J. F. Supple, C.B., R.A.M.C.	1	0	0
Colonel W. Allan May, R.A.M.C.	0	10	0
Previously acknowledged in THE LANCET	81	6	6
Total	£86	9	6

HER 167TH APPEARANCE.

WOMAN named Susan Wilson appeared at the Salford Police court recently on a charge of drunkenness. She is a familiar acquaintance of the magistrates and the police, having been before the court 167 times. On a Saturday evening she requested the police at the Town Hall to take her into custody. She liked the workhouse better than the prison but she said it was too late to g there on Saturday night. She was discharged in order that she might go to the workhouse. But of what use is this constant round of ginshop, workhouse, police, and prison? If in a home she might be saved from herself. Familiarity, no doubt, blunts the sense of shame and the report of the case seems to show that the humorous rather than the pitiful aspect of the case presented itself to the court on her 167th appearance.

THE INHABITED HOUSE DUTY.

To the Editors of THE LANCET.

SIRS,—Will you allow me to call the attention of medical M.P.'s and Parliamentary Committees to the serious injustice under which medical men lie with regard to their assessment of house tax? A medical man cannot live where he likes, he has to choose his house both as regards size and position from a purely business point of view. To all intents and purposes the medical man's house is a house of business. Why is not the house rated as such? Medical men (and schoolmasters who are in a similar position) are called upon to pay 100 per cent. higher house tax than a tradesman in the same locality. This high rating is a direct tax upon their industry. This is not a small matter to men whose expectation of life is less than that of any other calling bar publicans and sinners, and therefore whose productive period is of the shortest and most precarious. If the attention of the Chancellor of the Exchequer was called to this fiscal anomaly I am sure tardy justice would at last be done.

I am, Sirs, yours faithfully,

Ilkley, May 11th, 1902. A. H. BAMPTON.

THE R.A.M.C. UNIFORM.

To the Editors of THE LANCET.

SIRS,—May I point out to your correspondent, "Surgeon-Captain," in THE LANCET of May 10th, p. 1370, that the Sam Browne belt has *not* been officially ordered for Volunteer medical officers, and it is, I believe, not the intention of the authorities that it should be worn by medical officers of units? Unfortunately a volunteer association, although unauthorised, stated that the Sam Browne belt was required except in review order.

I am, Sirs, yours faithfully,

May 10th, 1902. V. M. O.

A Vain Woman is strongly recommended to have nothing to do with the quacks in question. Plastic operations in surgery should, in our opinion, only be performed to remedy grave defects—conditions which make the victim an object of repulsion. The signs of ordinary wear and tear of life should not be made the subject of surgical interference, and no self-respecting surgeon would operate upon a patient for the gratification of the patient's vanity solely. Secondly, such a plastic operation as "A Vain Woman" seeks information about would probably be unsuccessful from the first; it might be attended with dangerous complications; and, at the best, it would only be of the slightest temporary benefit to her appearance.

G. F. S.—We are not prepared to say that any one text-book on the subject is better than any other. We have reviewed several favourably. Our correspondent might attend the classes at the Sanitary Institute, Margaret-street, London, W., when his lecturers would advise him which text-books they would prefer him to use.

Yenikeny.—If our correspondent advertises his wants in the usual manner he will find out the market price. Such matters are only decided by mutual arrangement.

A. J. N.—The Drouet Institute are a set of quacks.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.) West London (2.30 P.M.), London Throat (2 P.M.), Royal Free (2 P.M.).

TUESDAY (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

WEDNESDAY (21st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.).

THURSDAY (22nd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.).

FRIDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London

Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square, (9.30 A.M.), City Orthopædic (2.30 P.M.).

SATURDAY (24th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.), Throat, Golden-square (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (20th).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Annual General Meeting. Election of Officers. Ordinary Meeting. Dr. Hunter: Infective Lesions of the Tongue, Stomach, and Intestines in Addison's Anæmia (Lantern Demonstration).—Dr. Rolleston: Membranous Cholangitis.—Mr. A. Lucas: Unusual Variety of Knee Joint in Hæmophilia and Congenital Atresia of the Small Intestine.—Dr. F. J. Smith: Disseminated Carcinoma Simulating Tubercle.—Dr. Fennell: Sarcoma of the Suprarenal Body.

WEDNESDAY (21st).—ROYAL MICROSCOPICAL SOCIETY (20, Hanover-square, W.).—7.30 P.M. Mr. D. J. Scourfield: Exhibition of Freshwater Entomostraca.

ROYAL METEOROLOGICAL SOCIETY (Society's Rooms, 70, Victoria-street, S.W.).—4.30 P.M. Papers:—Mr. W. H. Dines: Report on the Wind Force Experiments on H.M.S. *Worcester* and at Stoneness Lighthouse.—Dr. H. R. Mill: The Cornish Dust Fall of January, 1902.

UNIVERSITY COLLEGE MEDICAL SOCIETY (Gower-street, W.C.).—8.30 P.M. Address: Prof. J. Rose Bradford: The Relation of Biology to Medicine.

THURSDAY (22nd).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, Edgware-road, W.).—8.30 P.M. Clinical Evening. Cases will be shown by Mr. W. Watson Cheyne, Dr. A. Whitfield, Dr. A. Morison, Mr. F. Jaffrey, and others.

NEUROLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—8.30 P.M. Clinical Evening. Cases will be shown by Mr. R. Cross, Dr. P. Weber, Dr. F. Buzzard, Dr. Colman, and others. (Patients at 8 P.M.)

FRIDAY (23rd).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Annual General Meeting. Election of Officers for Session 1902-1903. Papers:—Sir T. Barlow, Bart., and Dr. H. B. Shaw: Inheritance of Recurrent Attacks of Jaundice and of Abdominal Crises with Hepato-spleno-megaly. (Two cases will be shown.)—Dr. W. Hale White and Mr. C. H. Golding-Bird: On the Subsequent History of Three Cases of Colitis in which Right Lumbar Colotomy was performed several years ago.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY (20th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. W. Ewart: Clinique. (Medical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Taylor: Heart Murmurs, their Significance and Treatment.

POST-GRADUATE CLINICAL DEMONSTRATION (Westminster Hospital).—4.30 P.M. Mr. W. Turner: Surgical Cases.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Mr. Ballance: Cerebral Abscess.

WEDNESDAY (21st).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. J. Cantlie: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Eccles: Surgical Anatomy.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. T. H. Green: Difficulties in the Recognition of Pulmonary Tuberculosis. (Opening Lecture of the Summer Session.)

THURSDAY (22nd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Baldwin: Treatment of Injuries.

CHARING-CROSS HOSPITAL.—4 P.M. Dr. J. Mitchell Bruce: Medical Cases. (Post-Graduate Course.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Penrose: Demonstration of Selected Cases.

FRIDAY (23rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. D. Grant: Clinique. (Ear.)

POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Abraham: Cases of Diseases of the Skin. (Prof. Unna of Hamburg is expected to give the Demonstration.)

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 15th, 1902.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
May 9	30·18	N.E.	0·14	91	52	39	41	45	Cloudy
,, 10	30·13	N.E.	0·01	97	51	37	41	45	Cloudy
,, 11	30·00	N.W.	...	90	52	44	47	47	Cloudy
,, 12	29·82	S.W.	0·03	90	54	46	44	46	Raining
,, 13	29·92	N.	0·14	92	51	38	41	45	Fine
,, 14	29·88	N.W.	0·01	99	56	37	40	45	Hazy
,, 15	29·75	S.W.	0·03	53	46	41	43	45	Raining

During the week marked copies of the following newspapers have been received:—*The Sun (New York), Manchester Evening News, Yorkshire Post, Bradford Observer, Morning Post, Hereford Mercury, Essex Herald, Hartlepool Mail, Brighton Gazette, Surrey Advertiser, Bristol Mercury, Dublin Express, Times of India, Penrith Observer, Daily Graphic, Huddersfield Examiner, Sanitary Record, Local Government Chronicle, Hertfordshire Mercury, West Sussex Gazette, Kent Messenger, Middlesbrough Gazette, Birmingham Post, Aberdeen Press, Chicago Medical Times, Scientific American, Clinical Journal, Indian Medical Record, Guy's Hospital Gazette, &c.*

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